An Address
ON
ELEMENTAL PATHOLOGY,

Delivered in the Pathological Section of the British Medical Association,

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EVERY pathologist must have felt that the greatest difficulty in his study is in the manifold complexity of the body in which it is pursued. The living human body is, surely, the most complex mass of matter in the known world. In composition it surpasses the highest powers of chemical analysis; in mechanism it is as far beyond the calculations of the physicist; its structures are but dimly seen with even the most perfect microscope; all the known forces of nature are constantly and coincidently at work within it; through circulating blood and a nervous system every part is within swift communication with all the rest; and it includes the apparatus of a mind from whose influence no portion of its matter is distantly removed. And in this body the pathologist has to study, not that which is fixed, orderly, and natural, but that which is in disorder and unsettled. May we not therefore hold that, among all the sciences of observation, human pathology has, in the very nature of its subject-matter, the greatest difficulties to contend with?

I have long and often felt that in these difficulties we might gain help from studying the consequences of injury and disease in the structures of plants. For although these, too, are complex, minute, and hard to analyse, yet they are less so than are the structures of any but the very lowest animals; and, which is most important, the processes in them are not subject to the influence of a nervous system, or of a common nutritive fluid distributed from a central organ and quickly carrying to every part materials derived from all the rest. In the absence of a nervous system and of a quickly circulating nutritive fluid, we come nearer to the opportunity of studying a really elemental pathology, nearer to the changes wrought between formed and varying formless matter. I say, without a nervous system and without a circulating fluid; for though some of the properties of vegetable structures, such as are shown in their subjection to the influence of anæsthetics, their movements in relation to light, and the various groupings of their colouring particles, indicate a likeness to the properties of simple nervous structures; and though, through communicating minutest channels, every portion of a plant may be regarded as in relation with all the rest, yet these small degrees of likeness can scarcely detract from the great contrast between plants and animals in the having and the not having nervous systems and circulating bloods.

It was in the hope of promoting a study of elemental pathology that I determined, when I had the honour of being asked to preside in this Section, to put together various facts in vegetable pathology which, in the idleness of vacations, I had learned. I thought that I might provoke some of my hearers to a study which I supposed that few had pursued. I was nearly turned from my purpose when I found the vast quantity of good scientific work that has been done in it; the many volumes of books and the hundreds of papers relating to the injuries and diseases of plants which have been written within the last twenty years by both botanists and cultivators, especially by those engaged in the schools of forestry and orchard-culture in Germany. I saw no hope of studying them worthily; but, in those that I have had time to read, I have seen enough to make me more than ever sure that human pathologists may find, in watching the consequences of injuries and diseases of plants, facts of the highest interest in their more proper study.

Let me point out some few of these; but, first, I must disclaim all pretence of an ability to treat the subject as a scientific botanist, or a practical gardener, or anything intermediate between these excellent extremes. I can only, as a human pathologist, see that knowledge of great value is within our reach: I may be able to point out to you where and how some of it may be found; and I can promise attractions of novelty in the study, and of renown to be gained from it; for, admirable as is the work already published, very little of it has been done by those who could fully estimate its value in human pathology.

In my selection of subjects, I will limit myself to those that are of interest in general pathology; and, first, to hypertrophies, or the simple overgrowths of natural, or nearly natural, structures. Of these, I do not know that there are in plants any well-marked instances corresponding with those which are the most frequent in animals, in which a part grows in direct proportion to the exercise of its function, and thus may grow to relative excess when its function is, through the will or for necessary adjustment, excessively discharged. But, in plants, there are abundant opportunities of studying those forms of hypertrophy which depend on an increased supply of nutritive material to any part. To mention but one: the arts of partial or complete "ringing" and of constricting or bending the branches of trees depend for success on their ensuring an accumulation of nutritive sap in the part of the branch from which its movement is checked. The result is what we may call an hypertrophy of flowers or, in other instances, of fruit, or wood, or bark, proportionate to the increased supply of nutriment; just as, in ourselves, hairs and some other structures will grow excessively with an excessive afflux of blood; or, still more and in almost exact parallel, as limbs will grow with a retarded reflux of lymph.

Similarly, I believe that you may find in plants many instances of the kind of hypertrophy which, in ourselves, we call compensatory, in that, one part being repressed or removed, another enlarges with growth of natural structures, as if for compensation; for I think that some of the arts of gardening are based on observations that removal of certain parts of plants will induce an overgrowth of others. Perhaps, among these you may find facts which may help to explain those obscure cases in animals and ourselves in which parts or organs, which have no natural alliance in function, are yet commonly allied in disease, as if they were in some relation of complemental nutrition. Such are the excessive growths of connective tissue and fat which may follow the removal of the generative organs; events well known but, I believe, not well explained.

I will not cite more facts. Only consider how many of the luxuries from our orchards and gardens are really such growths as in our pathology we should call hypertrophies, and that to produce these is within the art of the gardener, and you may see how large a collection of facts which may be useful in our study are within our reach, constantly at hand for observation and, which is yet more important, within the range of experiment.

Let me speak next of some illustrations of the simple defects of nutrition, which we class as atrophies or degenerations.

I am not sure whether there be among plants any atrophies by mere wasting of parts once completely formed, which may be compared with the emaciation of animal structures.[1] Shrivelling, drying, withering, and defective growth are only too frequent; but these are all different from that unmaking and removing of structures which we trace in both the healthy and the morbid processes of nutrition in animals.

The atrophies with degeneration are very numerous; but I will take for illustration only that group which we may see beginning all around us in the decay and fall of leaves. This decay is their senile degeneration. It is marked chiefly by their changes of colour—the changes to which we owe the characteristic beauties of our autumn scenery. These are accompanied by changes of texture, shown in the dryness and brittleness of the leaves, and by changes of chemical composition; but I will refer to only the changes of colour, and observe that these indicate decay, not death. They do not occur when fresh leaves are quickly killed, as in hot water, or when they are pressed and dried for an herbarium.

Among many things to be observed in the changes of colour, let me first ask you to note their usual symmetry. One of the characteristics of mere degenerations, as we see

[1] I may have overlooked many instances of it; but some that may seem like mere wasting are rather diseases with associated degeneration. Such are the gum-disease (gummosis), the resin-flux (resinosis), and others of the same group, which I find classed as liquefactive diseases, and in which cell-walls, wood, and other structures dissolve in or into morbid products. See Sorauer, Handb. der Pflanzenkrankheiten, p. 184; and Frank. Encykl. der Naturwissenschaften, Pflanzenkrankheiten, p. 309. I venture to guess that these may give help in the study of our mucoid and other liquefactive degenerations.

them in old age, is that they are symmetrical. I hardly need cite instances; many of us may study them in ourselves or one another. Symmetrically we become, equally on right and on left, bald, or grey, or wrinkled, or dusky with dark pigment in our epidermis, and harsh-skinned with thickening and hardening of its cells. And we know that, as a rule, arteries become symmetrically fatty and calcareous; and that very commonly joints are symmetrically affected with the arthritis of old age, and so on. Now, similarly, the rule in leaves is that, in so far as they are symmetrical in shape and structure, so are the changes of colour which mark their decay or degeneration.[2] You may find, indeed, very many exceptions to the rule; for it cannot be observed in leaves which have been unequally expanded, or whose several parts have not been equally exposed to heat and light, or in which parts have been killed or injured. Many accidents may hinder the observance of a rule of symmetry; but the observance cannot be an accident; and, if you will pick up leaves enough, and look well at them, you will see that the general rule of symmetry in the changes of decay is as evident as is the similar rule in our own symmetrical diseases and degenerations.

The changes may best be seen in those leaves or leaflets of dicotyledons which have a simple bilateral symmetry, a median vein, or fibro-vascular bundle, passing through the length of each leaf and giving off side-branches; but it is often scarcely less plain in palmate and in pinnate leaves, both in their several divisions and in the comparison of each division with its opposite fellow. In such leaves you may trace, in each pair of similar parts, similar changes of tint spreading uniformly or gradually over them; usually, first from a darker to a paler green, from brighter to less bright; then to pale yellow or brown, or to some tinge of red, or scarlet, or flame-colour, or some other of the tints that make autumn scenery glorious.

Now let me point out some things in our pathology which these facts may illustrate. The changes of colour are not mere chemical changes ensuing in a dead part. Leaves do not usually die till after, sometimes long after, they have fallen. Their changes of colour and of texture, even to the last dull brown in which they crackle as we tread on them, are vital changes in the same sense as are those which we see in ourselves in the advance of old age. In this view they may be taken in evidence on the question as to the nature and meaning of some symmetrical diseases.

There are at least two reasonable theories concerning these diseases. One is, that the symmetry is due to the relation between some morbid material in the blood and certain parts which are symmetrically placed, and are exactly identical in composition; absolutely like to one another, and not absolutely like to any other part which is not similarly affected by the same material in the blood. This was the theory on which Dr. William Budd and myself wrote our essays on the symmetry of disease nearly forty years ago. The other, which at that time I only ventured to suggest, but which is now, I think, rather dominant, is that symmetry in disease is determined by the disturbed condition of symmetrically disturbed nerves, the disturbance issuing from a single nervous centre. I cannot now discuss this question, or endeavour to show how probable it is that each theory is true and sufficient for certain cases, and that for some time they must be combined; but the symmetry of decay in leaves may be taken as a strong fact in support of at least these two principles: 1. That symmetrical changes may occur in degeneration and disease, as certainly as in development, without any influence of a nervous system or of a circulating blood; and 2. That, among structures which, to all our tests, may appear identical, those alone may be absolutely alike which are symmetrically placed. Surely no two things can appear more alike than are two adjoining leaves of a tree, or two parts of the same leaf; and yet, if under the same conditions, these do not decay in the same time and measure, it can only be because they are not absolutely alike. Thus the symmetry of decay in leaves may prove that none but symmetrically placed parts may be verily alike; and thus the possibility, to say the least, that in ourselves a diseased blood may similarly affect only such parts, and thus that, among symmetrical diseases, there may be some of which the essential and sole necessary condition is some morbid material in the blood.[3]

But let me now point out another of the lessons which may be read in the decaying leaves; for really the pathologist may find in them as many as the moralist and the poet have found.

The leaves, I have said, are decaying, not dead; and their fall is due to other degenerative yet truly vital changes. Dead leaves do not similarly fall. If a branch have been killed before autumn, you may often see its dead leaves hanging dry and withered all the winter through; and often when leaves are yellow and withered in their last decay, they hang quivering and spinning, ready to fall, yet waiting. Each leaf is literally hanging on a thread, and at last, by a rougher wind, or a drop of rain, or some chance violence, the thread is broken, and the leaf falls.

This breaking of the thread is preceded by degenerative changes in the structures of the leaf-stalk and of the stem adjacent to their juncture or articulation. These changes were first well described by the late Dr. Inman[4] of Liverpool; they have since been made more fully known by von Mohl[5] and others, and the rules observed in them hold, with certain variations, in the fall of petals, bracts, fruits, some twigs, and other deciduous organs.

In their beginning and maturity, the structures of the leaf-stalk and the stem or twig are continuous. There may be some external mark of distinction, but within there is exact continuity; the epidermis, parenchyma-cells, fibres, and sap-vessels are alike continuous. But, in preparation for the fall, changes ensue in the adjacent parts of both leaf-stalk and stem. In both, alike and equally, the cells multiply by partition, and those most nearly adjacent change, by a process of degeneration, into cork-cells, dry, brown and air-holding. Then, as these degenerative changes advance from opposite directions towards the plane of junction between leaf and stem, they meet, and, at their place of meeting, an intermediate layer, or rather two layers, of cells die and become scale-like and part asunder; and now the leaf is ready to fall. It hangs only on the dried thread of fibres and vessels which pass into it from the stem, and the stem is protected by its layers of cork and withered cells from the invasion of parasites and insects.

It would be hard to find a more admirable instance of processes adjacent, coincident, concurrent to a common end, yet independent. We have many of the kind in our pathology, but none more evident, or more within reach of complete study, as of vital processes tending to one end, but not guided from one centre; concurrent, but not concatenate; as independent as are the works of the several bees that make one honeycomb. And thus we may learn from the falling leaves a lesson against thinking that, when we see concurrent morbid processes, we must always expect to find some centre from which all are guided. It is not to be doubted that in organisms such as ours, in which the work is more divided according to its kind, and more distributed to appropriate organs, more is subjected to regulation by central organs, and the working of each part is more influenced by that of all the rest; yet it is not probable that, in any instance, the law is abrogated according to which each elemental structure lives its own life in a method determined by its own inherent properties. There is no law in pathology more important than this: let the falling leaves remind us of it.

And yet one lesson more. That thread on which for a time the falling leaf hangs quivering—that thin bundle of fibres and vessels connecting it with the stem—is regarded as a development from simpler cell-structures. Fibres and vessels are "higher" structures, so much higher that the relation between the Vasculares and Cellulares in plants may match in importance with that between the vertebrata and the invertebrata in animals. But mark this instance of anomaly in our language. In the elevation from the lowly cellular state to the higher dignity of fibres and vessels, there is, indeed, an instance of that development which makes fit for membership in a higher economy—that is, an economy more nearly like our own. But in the attaining of this fitness there is loss of vital power. There is no such activity of organic life in the vessels and fibres of wood or

[2] "In so far," for the symmetry of living things is not mathematical; it is artistic, in the divine perfection of art.

[3] In connexion with this subject, it may be useful to study the variegations of leaves, in some of which, as in many varieties of Begonia, a perfect symmetry of colours is observed; in others, as in many laurels, complete asymmetry. Instances of completely unilateral decay may sometimes be found in cabbage-leaves and turnip-leaves near the roots; sometimes, also, in laurel-leaves. They may be suggestive in the study of unilateral organic diseases, some of which are not wholly due to disturbances of trophic nerve-force.

[4] Henfrey's Botanical Gazette, 1849, p. 59, from the Proceedings of the Literary and Philosophical Society of Liverpool, No. 4, p. 59.

[5] Botanische Zeitung, 1800, Jahr. 18.

bark as there is in the cells around them; they are comparatively unchanging; they cannot multiply; they cannot repair their own injuries; cannot protect themselves; cannot even degenerate as the fading leaf-substance around them does (for even to degenerate needs vital power); they can only die, and the dead thread on which the decaying leaf hangs cannot dispart itself; it must be broken by some alien force. In the taking of higher form the cells seem to have spent their power of forming.

Now we have in ourselves similar instances of degenerations which we call developments. When cartilage becomes bone we usually say it is developed; but this is only because it becomes fitter for a share in a higher condition of our economy. The man is "higher" than the child, and therefore we are ready to speak of everything as ennobled if it contributes to his manliness. But, in respect of texture and self-activity in vital process—in the activity which can work with even a distant supply of blood,—cartilage is better than bone; and the change into bone partakes of the nature of a calcareous degeneration; in general utility there is development, in self-activity there is degeneration.

The same may be said of many changes from cells to fibrous structures in ourselves. In teleology there is elevation; in vital histology, degradation. And this anomaly of words is found, not without some confusion of thought, in parts of our pathology. We speak of rickets as a hindered or arrested development, and so, in respect of purpose and utility, it is; but in respect of elemental tissue-life it is rather an arrested degeneracy.

You may study such anomalies of terms in many instances in plants. Let me suggest a thesis for the D.Sc. There are such things as green roses: show the analogies between a green rose and a rickety child.[6]

But now let me end my notices of those changes in plants which you may study for illustration of atrophies and degenerations and retrogressive metamorphoses in ourselves. There are many more, such as the sweetening of fruits, in which, while becoming more useful to ourselves, they acquire chemical conditions less distant from inorganic matter; and the red and yellow tints of ripeness, which are colours indicative of imperfection, or the central softening and decay of fruits very like that of large morbid growths. In all these, as well as in decaying leaves, you may study general pathology when and where you will.

I will next speak of the repair of injuries. In studying the processes of repair in plants a first observation may be that, speaking generally, the repair of injuries and diseases is less complete in them than it is in animals, even than in ourselves and others of the highest groups. The processes of repair, so far as they extend, are similar in both, but in plants they rarely extend further than to be defensive or protective to the injured parts; they seldom reach to what may justly be called reparative or reformative, and much more rarely to anything that may be named reproduction or regeneration of lost parts. Indeed, the only instances of reproduction which I have found recorded are those of the cells of Vaucheria,[7] and of parts of the minute leaflets of the small moss, Brynm Billardierii, and even in these the mid-rib was not reproduced.[8]

In most of the ordinary wounds and other injuries of leaves and stems, as well as of petals and fruits, we see only incomplete repair. Punctures and incisions and minute excisions, such as in ourselves would be quickly closed and healed, and in a few days be almost unobserved, are, in plants, not closed at all, unless with careful help and in some few species.[9] The gaps or spaces are not filled-in with new material, there is no tendency to contraction, the edges do not draw together. The healing which does take place in these cases may be compared most nearly with that which, in animals, we see in wounds left open and healing under a scab. The cells and the ends of the fibro-vascular bundles which are cut across empty themselves and die, and then, becoming dry they slowly scale off and are detached; or the contents of the cells may ooze out and yield a gummy deposit, which may dry and glaze the surface of the wound. After a time this cracks, and is detached; but while it lasts it serves, as do the dead and dry layers of divided cells, for some protection of the cut surfaces. They serve, alike, for timely protection against invasion by parasites, just as in an animal do the dried blood or the first exudation on a wound left open. Beneath this temporary protective layer the more permanently protective or reparative changes now ensue, and these are usually described as in two methods—the formation of cork and the formation of callus.

In the healing with cork, which is the more frequent in the more succulent parts of plants, the layers of cells next beneath the dead cells or the gummy covering multiply by frequent partition, forming rows of thin-walled flattened cells. Then of these the outermost, lying at and next to the surface of the wound, become cork-cells, their walls thickening and their contents being replaced by air. The more deeply seated remain active, still capable of multiplying and of replacing the cork layer, which now serves as a dermal covering, and becomes continuous with the periderm at the borders of the wound, but does not acquire an epiderm.

In the healing with callus, examples of which may be studied in the closure of the wounded surfaces of slips and cuttings, the living cells next to the surface of the wound grow out into papillæ or short pouches, with or without cell-division. These may form a protective cork-layer, and if they approach from nearly adjacent surfaces they may intermingle and unite; or they may form other structures, replacing those injured, as epithelial cells, parenchyma-cells, or a new cambium layer, in which bark and wood and fibro-vascular bundles may form.

The best instances of healing after this manner are in the wounds or the splittings or strippings of bark which do not go through the outer layers of the cambium in vigorously growing stems or branches.[10] In the actively living structures of the cambium, if it be very gently guarded, callus forms by outgrowth and division of cells, somewhat after the manner of granulations, and of these, not only bark but wood, vessels, bark and cork may form and become connected with the similar tissues at the borders of the wound.

These, I say, are examples of the best healing known in plant-structures, and they must be worth studying carefully, for they would illustrate many points in our own healings and are far more apt for minute examination than any injured structures in animals.[11] Yet even in these the defective reparative power in plants is shown. An animal, if skin be stripped from it, will, if possible, lick the raw part, and then let dust and air and dirt collect and help to make a scab with blood and oozing fluid, and under the scab new skin will form, not indeed perfectly but well. But when bark is stripped only down to the living cambium the raw part must not be touched; mere wiping or touching with the finger, or too much drying, may kill the cambium-cells and prevent all healing; or parasites may attack it and make more mischief. And when we leave these best cases the repairs observed in plants are far less; even small branches or twigs when partially broken do not reunite, unless in a few instances in succulent plants in which the broken surfaces are carefully kept in contact, and even in them no new woody tissue may be formed. You know what is called in surgery a greenstick-fracture and its sure method of repair. In a real green stick no repair of the kind would happen; no ensheathing or intermediate callus would form; at the best the broken surfaces would be covered with a protective layer of cork without an epiderm. I cannot find an instance of repair in plants which even approaches in completeness to the ordinary repair of a broken bone or a divided nerve or tendon in ourselves or any other animal.

Perhaps the strongest contrasts may be seen in the wounds or strippings of trees that go down to the layers of wood; or, in what will follow the amputation of a branch from a tree and of a limb from a man. You may see in front of St. Catherine's College some elms from which branches were cut yesterday, and not far off, at Addenbrooke's Hospital, I dare say you may see patients from whom parts of limbs have been amputated; and, if the stumps have been treated after the manner advised by our distinguished President,

[6] Help may be found in the study of Dr. Ord's thoughtful paper "On Brownian Movements" in the Journ. Micros. Soc., June, 1879.

[7] As quoted from Hanstein by Frank in the Encykl. der Naturwissenschaften, Abth. i. Lief 12. p. 380; and in Botan. Zeitung, 1873.

[8] Described by K. Müller in Botan. Zeitung 1856, p. 200, and quoted by Frank, Waldenburg, Beijerinck, and many more, who do not add any similar fact.

[9] See Frank, l.c., p. 383-4.

[10] It may be well studied in longitudinal wounds made through bark for the relief of tension. (See H. de Vries in Archives Néerlandaises, t. xi; Haarlem, 1876.)

[11] I have adopted, chiefly, the descriptions of healing given by Frank (l.c.). I hope that more minute descriptions and more mutual illustrations between animal and vegetable repairs will soon be published by Mr. Shattock, who has been studying the subject with great care and skill.

they will have been left to be repaired by nature as truly as are the stumps of the branches of the elms. The stumps in the hospital have been cut in better shape for healing; but those in the garden have the advantage of more perfect rest, and, in whatever shape they might have been cut, the result would have been the same. Now, it is most probable, nearly sure, that the human stumps will be healed in a few weeks, and that in two or three months all the wounded parts will be covered in, with skin and scar and cuticle firmly adhering and compact. But it will need a very long life to see the healing of any stump of the same size on the trees. The wood cut across will die, and its necrosis will never be repaired; rotting, like a caries, may extend from it into the trunk, but it will not be repaired. Year after year the annually formed rings of new wood and bark will overlap the borders of the wound; each year they will grow thicker and will converge, and at last after many years they may, perhaps, meet and coalesce and cover in the wounded surface; but they will not unite with it, there will always be a cavity over the dead wood: a stump so ill-healed as would be a shame to any hospital. I must not imply that there are no better healings after amputations in trees than you may see in elms; some trees heal better, as do beeches and planes; but I think it may be said generally that the stump of any branch will need more years for its healing than the stump of a limb of the same size will need of weeks; and that, in the end, the work of the weeks will be far more reparative than that of the years. And in this reckoning I would include not only the limbs that have been surgically cared for, but those that have been violently crushed or mutilated in animals left to themselves.

This slowness and defect of repair are observed in other things besides the healing of wounds. Dead portions of leaves, or of wood, or other structures, are not cast-off unless by external force.[12] We have borrowed the word "exfoliation" to tell of the separation of dead bone; but, as I have said, it is only living leaves that can exfoliate. Dead pieces of young wood remain where they were killed, as they often are, without external wounds, by hailstones[13] or any accidental blows. The structures adjoining them may become hard or corky, but they do not separate from them, there are none of the reparative changes which are seen in even a "quiet necrosis." Similarly you may often see dead tips of leaves, perfectly defined from the living parts by colour and by texture, yet without any groove or other sign of process of separation, the dead and the living epidermis remaining still continues. And as to recovery from diseases I believe it may be summed up in saying that no vegetable structure altered by disease ever reverts to its original healthy state.[14]

Now let me commend to you this subject of the repair of injuries in plants, not only for illustrations of our pathology, but as a part of the study of what may be called the philosophy of healing. They heal very slowly and imperfectly; they may need many years for the healing of small injuries—eight or nine years for a frost-crack in a young branch—[15] yet they do heal; the intention, as Hunter would have called it, is not given up. Let me relate one case.[16] A fir tree, fifty years old, had a large piece of bark stripped from its trunk. The wound extended round nearly a fourth of the circumference of the trunk, and laid bare the wood. It was not dressed or guarded; the outer layer of the exposed wood died as usual, and then every year the successive annular growths of new wood and bark extended a little further over the bared place. In one hundred and fifty years these growths met and coalesced, and the wound was covered in. When the tree was felled and cut through at the injured part, where there was still a deeply depressed scar, the concentric rings of wood proved the growth of fifty years before, and one hundred and fifty after, the injury, and even now the healing was not complete; there was still a cavity between the old wood and the new. The healing was not such as we should call good in any similar case in an animal. Still, there was healing; the "intention" was maintained for a century and a half.

Surely, in our familiarity with the processes of repair we overlook their wonder; the wonder that there should be in anything an inherent power of repairing the consequences of accident; that, for instance, in any one of us, after living for many years, with only those timely regular changes, the methods of which we have inherited from our ancestors, an accident, some quite unlikely event, such as may never have happened to an ancestor, such as no conceivable process of selection or of inheritance can have prepared us for, some mere chance as we must call it, should bring-out an increased power and a new method of organising structures exactly adapted to the repair of the consequences of that chance. And let me remind you that this power of repair is not a property of living things alone—it is evident in crystals.

It may seem unreasonable to say that we may study principles of elemental pathology in the apathetic inorganic world, or in things that we call dead. But certainly we may study them in crystals. The experiments of Jordan which I repeated many years ago, and related in lectures at the College of Surgeons[17] have been extended by Pasteur,[18] Karl von Hauer,[19] and others, and this chief fact has been abundantly proved—that if a portion of a crystal be broken off, or filed or dissolved away, and if then the mutilated crystal be replaced in a solution of the same salt or of an isomorphous one, the lost part will be replaced, the damaged form will be repaired. In this process of repair the whole crystal will be enlarged, new crystalline matter will be formed on every surface, but the quantity formed on the injured part will be greater than that formed on any other part, and repair will be more active than mere growth till the proper form of the crystal is regained. Then, when the repair is complete, growth alone will go on and each part of the crystal, if it remain in the same solution, will increase in due proportion with the rest.

It seems impossible, by any just definition, to separate this process from those which, as pathologists, we study in the repair of the accidental injuries of living bodies. In all alike, when a natural form has been lost or impaired by external force, the native formative power works at the injured part with an energy and a method modified appropriately to the recovery from the loss, and then, when the recovery is achieved, returns to its previous energy and method. Of all alike, it may be said that where we find evidence of a design to be fulfilled in the attainment or maintenance of a certain form, there, also, we may find evidence of some power to repair injuries which that form may sustain from accidental external forces.[20] However various in its degree and method the power of repair is in all.

I wish that some of you, with a good broad knowledge of pathology, would study this repair of crystals and the possibility of their recovery from other changes besides those of form. The study could hardly fail to yield facts that would be very useful in the proper business of our lives. Only let me warn you that, as I have learned from Mr. Maskelyne, injured crystals need great care; if they are to be well repaired they must have as gentle handling and as kindly nursing as the tenderest patients of our own race.[21]

Even if, in studying the repair of injured crystals, we should not learn things directly useful in our own pathology, yet the facts should keep us safe from the error of referring reparative processes to such supposed causes as are called increased action, or determination, or reflex trophic force, or the like; they must convince us that repair is the result of some elemental general law of formed matter prevailing beyond the whole range of life and living structure, even in all natural bodies having harmonious form and proportions.

But while in the widest survey of repair that we can take, we may thus see an instance of so simple an expression of the Divine Will as we call a general law, yet in the degrees of apparent observance of that law, we find differences very wide and, so far as I know, quite inexplicable. We do not find equality of reparative power in all formed bodies, nor any rule of proportion between that power and their less

[12] A partial exception must be made for the tips of the fibres and vessels divided in some cuttings. See Arloing, Sur le Bouturage des Cactées, Ann. des Sc. Naturelles; Botanique, B. iv. p. 24, 1876.

[13] Goethe, Ueber den Krebs der Apfelbäume, 1877, p. 2.

[14] "It is confessed that diseases in the vegetable kingdom, when once established, are, for the most part, uncontrollable." Berkeley, Gardeners' Chronicle, Jan. 21st, 1854, p. 37.

[15] Goethe, loc. cit., figs. 3 and 4.

[16] From Ratzlurg, Die Waldverderbnis., vol. i., p. 98, pl. 21-2', and 31a-32.

[17] Lectures on Surgical Pathology, p. 118, ed. 3.

[18] Ann. de Chimie et de Physique, t. xlix. 1857, p. 6.

[19] Sitzungsbericht der K. Akad. der Wissenschaften, B. xxxix; Wien, 1860, p. 611.

[20] In the repair of crystals, it is well seen that form, rather than size or other quality, is the highest object of the reparative process. Karl von Hauer has found that if a portion of a crystal be so removed that all the parts of the remaining mass are still within the law of its primary form, the repair is either very slow or is even not attempted.

[21] Yet their healing may be "left to nature." Mr. Maskelyne has often seen in native crystals marks of injuries repaired.

r more simplicity of structure. There are some rules of such proportion among animals, but they are very partial, and the rule fails completely when we compare the reparative processes in plants with those in animals.

Let me revert to this comparative defect of healing powers in plants, though it may be only to tell my ignorance of all relations between it and any other of their properties or the conditions of their life. It is not related to any immunity from injuries enjoyed by them, for they are far more exposed to injuries than are animals; nor to any absence of necessity for healing, for, after wounds, they suffer severely, and often fatally, from the attacks of parasites of all kinds. It is not because of any lack of productive power at the injured part, such as we might be disposed to refer to the want of circulating blood or of nerve-force; for from many wounds of plants, as the art of grafting and of multiplying by slips or cuttings may show, entire new plants may grow; and yet these are not reproductions; they may, in one sense, replace that from which the slip was cut away, but they do not reproduce it; they are not continuous with its remains, and they commonly become much more than that which was lost would have become. Again, the increased growths, which injuries may produce in plants are not to their own advantage, though they may be so to that of a successor or a parasite; and on many wounds of wood hard and heaped-up masses of new wood may form, such as may be roughly compared with our cheloid scars and excesses of bone-callus. Neither can the defective repair be ascribed to any general tenacity in the regular methods of growth in plants, or to any general want of pliancy or of ability to adjust themselves to new conditions; for the art of horticulture abounds in instances of changes in methods of growth completely adjusted to changes of condition. There are in plants ample powers for enlarged growth and ample range of pliancy in method; but that special change in method of growth, which is familiar to us in ourselves and other animals, and which, as with design and on purpose, is adapted to the speedy healing of injuries, is in them comparatively defective. Which of you will work so as to find the explanation of what seems so strange an inconsistency?

(To be continued.)

ABSTRACT OF A

Lecture

ON THE

DESIGN AND SCOPE OF LECTURES ON THE PRACTICE OF MEDICINE,

Introductory to that Course given at Westminster Hospital,

BY OCTAVIUS STURGES, M.D., F.R.C.P.,

JOINT LECTURER ON MEDICINE.

GENTLEMEN,—The lecturer on medicine in the present day has unusual difficulties to encounter. Most that he has to say is already written in books. There are the seventeen volumes of Ziemssen's Cyclopædia, each as big as a family bible, and together weighing half a hundredweight and too bulky to take in a cab, and there is the vade-mecum which may be easily carried in the pocket. With so wide a range of choice, the student can learn just as much, or as little, as suits his purpose, at his own time, and in his own manner. What, then, is the justification for systematic lectures, especially when it is considered that we have in addition a teacher of practical medicine to demonstrate the methods of physical diagnosis, and a medical tutor to direct the pupil's study and test his knowledge? The lecturer on medicine, thus hedged in on all sides, must confine himself strictly to the terms of his undertaking—to the formal discussion, that is to say, of the various diseases of nosologists in a regular order. What is the use of it?

The question is one which is never absent from my mind at this season. Every student gives a practical answer to it by the regularity, and still more by the manner, of his attendance. We, on our side, all of us, it may be presumed, satisfied that our labour is not in vain, are probably not altogether at one as to its proper place and object. Some will say, for example, that by this oral teaching, which is more enduring than the silence of print, the lecturer conveys to his hearers, not a mere transcript of the books, but an enlarged view of the subject derived from long experience and a wider reading than the student can procure for himself. But there is the obvious reply, that this comprehensive treatment of the subject, like all the rest, soon gets into print, and is to be found in the books. When a teacher, by felicity of language or description, or any other unusual gift, succeeds in imparting knowledge more clearly or compendiously than heretofore, the whole world is soon in possession of it. The case of the lecturer is thus continually getting worse, for he has to contend with the ever-increasing force and ability of that which is written.

And yet, I cannot but think, more and more with every year, that there *is* a service in these lectures which nothing else can supply. Granted that what we have to say is already better said in books, granted that what is curiously called the "practical" part of the subject is now taken out of our hands, yet still, as I believe, there remains a purpose to be fulfilled by the occupant of this chair which becomes the more pressing as the subjects for medical study multiply. I will endeavour, in as few words as possible, to make this appear.

It is often said of medicine that it is becoming every day more precise in its language and more scientific in its methods; and if the ground of the improvement be sought, it will be found to depend in large measure upon the fact that the various appliances of more exact sciences have been pressed into its service. It is not that we have become more shrewd in observation or more logical in inference, but that we get more help from without. Accordingly, much time must now be spent in learning the use of instruments and the application of physical and chemical tests. And it happens inevitably that the student, observing the exactness and penetration of these aids and their close connexion with medical progress, learns to despise the vagueness of old medicine, and to regard this preliminary and manual part of his work as though there were nothing beyond. It is the function of these lectures to show him how greatly he is mistaken in this belief, to point out all that yet remains beyond the view of his instruments, and to make him understand how much higher than any manipulative skill or application of physical science is that faculty of judgment and discrimination which has yet to come, and cannot be learnt by rote, or by any other means than actual contact with disease. It is customary, I know, to speak of the results of such contact in very general terms, as though by association with the sick some mysterious virtue kept flowing, which, under the name of experience, should give to every man, from the mere efflux of time, a capacity in proportion to his years. I have no such meaning. On the contrary, I believe that accuracy in observation if not practised early is not practised at all, and that "experience" often comes to mean no more than the habit of superficial examination. What I would imply is that the time of your career has now been reached when you can no longer be guided solely by the strict letter of printed instructions—when you must either become the servants of routine, or else begin to exercise higher powers of intellect than have hitherto been appealed to.

The course of medical education is, in fact, always the same, but all do not pursue it to the end. There is, first, the recognition of the separate phenomena of disease—that period of training when isolated signs and sounds are much insisted on and discussed, as though they possessed an intrinsic and independent value. Next comes the faculty to appreciate these signs aright, as acquiring significance in their several combinations. Lastly, and in varying measure as the great acquisition of all, comes the capacity to interpret, not physical conditions merely, but all that these imply in their various relationships. That these are, in fact, the several stages of the journey may be known by the numbers that are to be found resting at each. Some pass their whole lives content with bare words; others go no further than to determine the physical conditions of disease, leaving or guessing the rest; only a proportion gather the facts together and press them home, perceiving that their task is incomplete until the whole of the phenomena have been reviewed and arranged.

And what I would have you observe of this progress is the danger that besets the passage from a lower and routine learning—which nevertheless is seen to be the most exact and the most directly informing—to that higher knowledge which, while it employs the best powers of the mind, is not

of the same certain and assured value, or to be appraised and measured with the same facility, as the other. It is this sense of insecurity that makes so many halt at this point, rehearsing for ever their tables and formularies, dealing in a jargon which they mistake for learning, and decline to exchange for it.

Here then, I repeat, is a definite object to be aimed at in lectures upon medicine: the actual exhibition and demonstration of disease, in all its complexity and variety, by means of living illustrations—exercise under a master in the very same problems which must presently be solved alone, with that sort of help to the solution which comes from the possession and the study of "worked examples." We need fear now no competition of the books, for we know that ours are better. I know for myself with what personal satisfaction, after labouring to describe some morbid sound or other aspect of disease difficult to reach by words, I have led the puzzled listener to the thing itself. Whatever is best in the verbal description gets thus fixed indelibly, while every such diversion is for the student a fresh contribution to that aggregate of experience which is to determine in the future, other things being equal, his relative merit amongst his fellows.

Such teaching must, indeed, always be incomplete, inasmuch as it depends for its illustrations upon the actual material that we have at hand. We cannot, like the books, discourse with the same fluency of hydrophobia and the plague, as of acute rheumatism or pneumonia. Yet the main purpose is not the heaping up of facts, but rather practice in arranging and interpreting them, and even this incompleteness of illustration is not without its use, for it gives the student a correct view of disease in its true perspective, exposing the unreality of that dead level of official description where every affection is depicted in its turn as though all were equally distinct and well defined.

You will say, perhaps, that by this treatment the course of lectures in medicine becomes a course of clinical lectures. And so truly does it, yet not in such manner as to interfere with the lectures we now call clinical. These latter are occasional and unconnected, they deal with some particular case, and point out unusual features of disease. They are controversial and speculative. Systematic lectures, on the contrary (in the strictest sense *clinical* if they are to be of any use whatever), follow a definite course, from which they only diverge occasionally, when attracted by the nature of their material; they point out not so much the exceptions of disease as its common rule, and show in the flesh in a series of living pictures all the chief articles of the syllabus.

All this implies, no doubt, much more than sitting at a lecture. The education I am thinking of is not to be got sitting or by any passive attitude whatever. The only question is as to the precise co-operation of teacher and learner in what must be a common work. Such difference of opinion as exists upon this point is partly explained and justified by considering that different orders of mind need different training. I cannot doubt that some have worked out this practical knowledge for themselves painfully and laboriously at the bedside, and have obtained their reward at last in a greater acumen and facility of diagnosis than often comes to those who give the hand and are shown the way. Yet for the great majority it is not too much to assume that our guidance and suggestion must go for something, provided only that the spirit of our teaching tends to educate and exercise the pupil's own judgment, not to bind him down to anybody's gospel. And while I am persuaded that no just conception of medicine can ever be conveyed in a series of dogmas, I have no fear whatever lest the frank exposition of the subject in all its ambiguity and incompleteness should disturb the proper relation between master and scholar. On the contrary, there comes to this latter of necessity, by the operation of the more liberal training, a conviction which both maintains the authority of the teacher, and in due season will form the ground of the student's own self-confidence—the conviction, I mean, that so long as the methods pursued are right and thorough, time and use continually make the way plainer and lessen the probability of error.

Such, then, is the ideal of that medical training which it is the chief business of these lectures to help forward. I am far from supposing that it is altogether realised. There is, indeed, a short reply to all that I have been trying to say, which I hear from you so often and with such little variation, that I cannot but think there is some substance in it. You say that there is no time for this sort of teaching, and no need for it; that the student can pass his examination without it. It is not easy to say whether the irony of such a statement is the more bitter as it concerns our present system of medical education or the vigilance of our examining bodies: the importance we attach to that practical knowledge which is the grand aim and end of all medical study, or the pains we take that only those who possess such knowledge shall have authority to take charge of the sick.

CASES OF ANEURISM ILLUSTRATING DIFFICULTY IN DIAGNOSIS, AND THE USE OF ESMARCH'S BANDAGE.[1]

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THE two following cases of aneurism in the lower limb present features worthy of notice. The first case was one of idiopathic aneurism of the anterior tibial artery—a rare affection, and attended in this instance with conditions which invested it with more than usual interest. Being of large size it raised a suspicion that it might be malignant disease, and having been originally mistaken, before it came under my care, for an abscess, and incised, it became the seat of secondary hæmorrhage, which, owing to the misguided refusal of the patient to submit to the necessary treatment, led indirectly to a fatal issue. The only means at my disposal for arresting the hæmorrhage, whilst giving the patient a chance of cure, was Esmarch's bandage, and it will be seen that, after one application for an hour without result, a second application for an hour and a quarter on the following day, when the hæmorrhage occurred, produced the desired coagulation in the tumour. This success, however, was itself unsuccessful, for the force of the arterial circulation was reduced below the point needed to return the blood through the already obstructed veins, and gangrene of the foot ensued. Amputation was persistently declined, and death resulted. The following is the outline of the case:—

CASE 1.—Arthur W——, aged fifty-eight, of rather a spare habit, was admitted into the London Hospital on the 8th February, 1877. His family history was very good, and he had always been a strong, able-bodied working man. He had been at sea for many years as a butcher, and for the last nine years had been a common labourer in London. He had always been a regular, temperate man. There was neither history nor appearance of syphilis, and the only severe illness which he had experienced was one attack of intermittent fever. He had never suffered from rheumatism, or been troubled with his leg. About six weeks before admission (the day before Christmas), whilst walking up stairs he felt a pain in his right leg, just below the knee, and on looking at it, he found a swelling not larger round than a halfpenny, and the same night he felt it pulsating under his fingers. Four days later he had medical advice, and was told that the swelling was an abscess. He was recommended to poultice it, and this he continued to do for about four weeks. The swelling enlarged rapidly every day, and the whole leg became larger and more painful. Two days before admission a small aperture was made in the tumour. The bleeding was free, and, according to the patient's description, "the blood spurted up in a stream like a fountain." A compress and bandage were immediately put on, and the bleeding was checked.

The patient was advised to come to the hospital, and he did so two days later. There was then a large oval swelling commencing a few inches below the right knee, and with the long axis corresponding to the axis of the limb. It looked red and inflamed, and on palpation gave a feeling of semi-fluctuation. Over the centre of the swelling there was a small punctured wound which was closed and partly healed. On pressing the scab off a few drops of pus exuded. The house-surgeon introduced an exploring needle through the aperture, and blood came trickling along the groove. Being

[1] A paper read before the Hunterian Society.

doubtful about the nature of the case, he sent the patient to bed to await my examination.

When I saw the patient in the ward, the aspect of the tumour at once suggested an aneurism. On pressing with the ends of my fingers firmly on the tumour, a strong pulsation was communicated to them, and examination with the stethoscope revealed a loud bruit of a rather rasping character. The swelling had more of a bruised than an inflamed appearance, but the skin was hotter than that of the opposite limb. The swelling extended round the outside of the leg to the posterior aspect; the calf bulged and pulsated. Large glands were found in the groin. Pressure with fingers on the calf communicated an impulse to fingers placed over the tumour in front. Compression of the femoral arrested the bruit and pulsation. Over the tumour, and especially behind, large veins were seen ramifying. The foot was a little swollen, and the tibial arteries beat feebly. The only question in my mind was this, Is the tumour an aneurism or a pulsating cancer?—a question to which I deferred giving a decided answer; but on this point I was clear, that the case should at once be treated as an aneurism by means of compression, the effects of compression to be carefully watched, and action taken according to circumstances. Hence I directed that the patient should be brought down from the upper ward, where he was lying, to the accident ward, where he could be under the immediate eye of the house-surgeon, and that a tourniquet should be applied without delay.

The following day it was found that the effect of the compression which had been kept up through the night had been to diminish the impulse in the swelling. Some comparative measurements of the two limbs were made by Mr. Buxton, the dresser, with the following results:—The circumference 2 in. below the head of the fibula in the sound limb was 10 in., and in the diseased limb 12; at 3 in. distance, 10 and 14; at 4 and 5, 10½ and 15; at 6, 9½ and 14½; at 7, 9 and 13½; at 8, 8 and 12½; at 9, 7½ and 11½; and at 10, 7 in. and 10½ respectively.

The patient was seen early on Saturday, the 10th, by two of my senior colleagues. Both inclined to the view that the tumour was of a malignant nature; one agreed with me that, in the existing uncertainty, it was desirable to continue treating the case as aneurismal by means of compression, holding amputation in reserve; and the other gave a decided opinion in favour of early amputation. A third colleague saw the case, and balanced the points on both sides very carefully without committing himself to a pronounced conclusion.

I mention these details to show the difficulty that often exists in cases of aneurism of coming to a correct diagnosis. In favour of malignant tumour were the size of the swelling, the enlarged glands in the groin, and the dilated veins over the tumour. The chief objections to the view of malignancy were, that the tumour could not be traced into connexion either with the fibula or with the tibia, and the character of the bruit. The bruit was loud and rough, audible along the tibia, over the knee-joint and internal malleolus. At one point—viz., the upper part of the anterior aspect of the swelling—Dr. Turner noticed that the bruit was double. I determined, therefore, to continue compression till Monday, if nothing should arise meanwhile to demand interference. In case of hæmorrhage, which seemed not improbable, owing to the artificial opening on the face of the tumour, there would have been no difficulty in temporarily arresting it with the tourniquet or Esmarch's elastic tube, and I gave directions that the patient should be constantly attended.

On Sunday I found that the swelling had increased in size, measuring an inch more in the centre than on the previous day, notwithstanding the application of the tourniquet. The pressure of the instrument gave the patient considerable discomfort, but this was relieved by hypodermic injections of morphia. On Sunday afternoon I determined to try the effect of the application of Esmarch's bandage, and I adjusted it in the way recommended by Mr. Wagstaffe, passing it quite lightly over the tumour, and firmly above it, as far as the middle of the thigh, where it was pinned. Cotton-wool was placed over the foot and leg before the application of the bandage. The bruit and pulsation were arrested for one hour, and at the end of that time the bandage was removed, after screwing up the tourniquet. After awhile I loosened the tourniquet gradually, and in a few minutes pulsation became evident, and both it and the bruit were re-established as markedly as before. The tourniquet was reapplied, kept on all night, and not removed till the middle of the following day. About one o'clock the clot plugging the aperture into the aneurism gave way and severe hæmorrhage came on, bursting through the cotton-wool and bandage round the limb. The bleeding was arrested by the tourniquet. I was summoned to the patient. I was about to adjust Esmarch's bandage with the strap for temporary security against hæmorrhage and to ascertain its effect upon the tumour, and I was about to urge upon the patient the necessity of leaving our hands unfettered in regard to amputation, when the patient informed me that he would not submit to any operation. The hæmorrhage had diminished the tension of the swelling, and so far altered it as to convince me that it was a false aneurism and not a malignant tumour. The only measure which the patient would tolerate was compression, but compression, whether digital or instrumental, with the ordinary tourniquet was ineffectual, and could not be maintained continuously so as to preserve the patient from the danger of recurrence of hæmorrhage. The only resources left were Esmarch's bandage and injection of perchloride of iron, or a combination of the two. I preferred Esmarch alone, and placed the patient under chloroform during its adjustment. Mr. Hutchinson, whose visiting day it was, saw the patient while the strap was on, and exerted his persuasive powers in vain to induce him to leave the surgeon unfettered. At the end of an hour and twenty minutes the bandage was removed, digital compression being maintained for some time longer. The limb was placed in cotton-wool. Pulsation had not wholly ceased in the aneurism after the removal of the elastic tube, and the circulation promised to become re-established in the leg and foot. But when coagulation in the sac became complete, and all pulsation and murmur were abolished, it was found that whilst the heel became hotter than usual, and showed marked evidence of the opening of a collateral circulation, the anterior part of the foot and the toes were cold. The veins on the dorsum became distended, and the surface mottled. On the following day the toes were cold and had lost sensation. Amputation was again urged without success. The tumour gave exit to venous blood, and became much diminished in size. Day by day the gangrene advanced. On the fourth day after arrest of the pulsation the disorganisation had extended to the leg. The orifice of the aneurism now began to ulcerate, and to give exit to black blood and broken-down clot. In spite of the pain and the danger to his life, the patient adhered with a Turkish fanaticism to his resolution not to part with his limb. On the 19th a line of demarcation had become evident in the lower third of the leg, but the constitutional state of the patient had become serious; quick pulse, high temperature, basi-pneumonia, flushed and anxious face, anorexia, want of rest and delirium, and in a few days more the scene was closed. Towards the end he might have been persuaded to submit to amputation, but it was too late for recovery, and I did not press him further.

Locally the post-mortem examination disclosed a nearly complete solution of continuity of the anterior tibial artery, and its ruptured part was occupied by a sac composed of the surrounding tissues and blood-clot. The sac was filled with broken-down coagulum. The aneurism was situated a few inches from the origin of the artery, and this portion contained a clot of partially decolorised fibrin, and the clot extended into the popliteal artery. It was by no means clear that the decolorised portion of the clot, which occupied the popliteal artery, had not formed at the time that the blood coagulated in the sac.

The second case was one of aneurism of the popliteal artery, projecting not in the popliteal space, but on the inner side of the limb, and thus inviting the unsuspecting practitioner to mistake it for some other tumour. The notes of the case yield the following history:—

CASE 2.—Henry C——, forty-four, a soldier, a well-nourished man, height 5 ft. 9 in., was admitted into the London Hospital under my care on August 20th, 1879, suffering from a tumour occupying the lower part of the inner side of the left thigh. He had served in the Crimean war and the Indian Mutiny. In 1858 he had a sore on the penis, which was followed by sore-throat, but not by rash, loss of hair, or other recognised sequelæ of primary syphilis. He had been accustomed to march fifteen miles a day for several weeks together. He had never had rheumatism or gout. In 1864 he had fever in India, and in 1872 he suffered from jaundice. He was discharged from the army in 1874, and since that time he had been a clerk. In the early part of last June he began to suffer from pains of a darting character in the left ham, aggravated at night when he was warm in bed. Fourteen days later he noticed on the inner

side of the left ham a small lump, which was painful, and gradually got larger and more painful. At times when he was out walking it would become so painful that he would have to stop and raise his leg, and this always relieved the pain. He consulted a hospital surgeon. Scott's dressing was applied. Removal was suggested, and the patient was allowed to walk about as usual. After his admission into the hospital a week later, my attention was called to him by my house-surgeon, who told me that there was an interesting tumour which he wished me to examine. I found an oval tumour of the size of a large orange, or of a shaddock, situated in the hollow above the inner condyle of the femur, distinctly circumscribed and solid. On grasping it with my hand, pulsation was felt. The pulsation was not a mere impulse, or pushing inwards of the tumour *en masse*, but of the generally expansile character of an ordinary aneurism, communicated to the hand in every direction. There was a loud, harsh, rasping bruit. On compression of the femoral artery both bruit and pulsation ceased. Pulsation could not be detected in the popliteal artery in the normal situation of the vessel in the ham, but it was felt in both the tibial arteries, and the limb below the aneurism was of natural warmth and aspect. The patient was anæsthetised with chloroform, and Esmarch's bandage and strap were applied for an hour. Before removal of the strap the femoral artery was compressed, and on gradually allowing the admission of blood into the limb by the main channel, a slight pulsation and bruit could still be detected. A third of a grain of morphia was administered hypodermically, and digital compression was kept up for three hours, at the end of which time no pulsation could be felt. The patient complained of a burning pain in the foot, which was warmer than the right foot. The leg and thigh had been enveloped in cotton-wool and a flannel bandage immediately after Esmarch's bandage had been removed, and this casing was kept on till the following day. On the morrow, the 22nd of August, he still complained of a burning pain in his foot; there was neither pulsation in the tumour nor swelling of the limb. On the 25th it was noted that the pain in the foot had passed off, and that the tumour had diminished in size. On the 12th of September the tumour was less than half the original size, hard, not painful, with good pulsation in the tibial arteries. On October 3rd the patient was discharged cured. I must add a word of praise for the care and attention given to the case by my house-surgeon, Mr. J. G. Clark, and the dressers.

These cases raise several points of importance relating to Esmarch's bandage as a means of treating aneurism of the limbs, and to the diagnosis of aneurismal tumours. The value of Esmarch's bandage in the treatment of aneurism of the lower limb has been clearly established by several successful cases published in the journals or brought before the Societies. It is well known, however, that it is not uniformly successful by itself, and not always when aided by instrumental and digital compression. Sometimes it might prove injurious. It is quite possible that with the greatest care it might induce sloughing of the tissues over the sac, and it might also have the effect of causing gangrene of the limb through an excess of coagulation. It is scarcely possible to state beforehand whether a case is likely to be benefited by the treatment. One or two cases have come under my observation in which, after prolonged application of Esmarch's bandage, the symptoms were barely relieved, but after the lapse of a certain time from the application the aneurism ceased, as it were, spontaneously to pulsate. My impression is that the most favourable cases for the use of Esmarch's bandage are aneurisms of moderate size, firm and not too near the skin. My first case was decidedly an unfavourable case for Esmarch's bandage, and the bandage was only applied at the first trial for the purpose, if possible, of avoiding amputation, or the less hopeful procedure of laying open a large sac and tying both ends of the anterior tibial artery; and at the second trial, with a view to arrest hæmorrhage, place the patient out of immediate danger, and give him a chance of saving a limb which he seemed to prize more dearly than his life. Ligature of the femoral was of course out of the question under any circumstances, as it must have induced gangrene. Amputation had most in its favour, and amputation I should have performed the moment that I found that coagulation of the blood in the sac was incompatible with the life of the limb below. The extension of the clot in the sac into the anterior tibial above the sac, and even the lower part of the popliteal, is certainly suggestive of the possibility of gangrene arising in other cases from a like cause; and I know not how the occurrence can with certainty be prevented. *Primâ facie* it would seem that the pressure of Esmarch's bandage might squeeze the blood from the sac into the feeding artery and even above it, and that this blood, remaining when the strap is applied, might coagulate, plug the vessels, and not be washed into the sac again when the current of blood through the main channels is restored. But I cannot speak with any certainty as to the extent of the liability to gangrene from such an accidental occurrence.

Of the two methods of applying Esmarch's bandage to an aneurism—viz., fixing the strap and removing the bandage, and pinning on the bandage without the strap, I think the former is preferable, as we can then make observations on the tumour such as might determine a doubtful diagnosis. But even here a caution is necessary. Free manipulation of an aneurism after the application of Esmarch's bandage might give rise to the very occurrence which we wish to avoid—viz., pressing blood or coagulum into the neighbouring vessels; and I am not altogether free from a remote suspicion that something of the kind happened in my first case at the second application of Esmarch's bandage, when a most excellent and careful surgeon made a minute manual examination of the tumour. It may or may not have been so. The liability to such an issue did not strike me at the moment, but it has arisen in my mind in the course of a retrospect of the case. At all events it may be wise to bear the possibility in mind.

The only other remarks which I have to make concerning Esmarch's bandage are: (1) that even when it is passed as lightly as possible over the sac some of the blood appears to be squeezed out of the sac, at least in my own cases in which this was done the sac seemed considerably smaller than before; and (2) that it might be advantageous, where the bandage aided by digital compression had failed, to inject a little perchloride of iron into the sac in combination with another application of the bandage. This treatment, however, I would only suggest for exceptional cases. In my first case, in which there was a ready-made aperture, I should have resorted to injection of the perchloride in combination with Esmarch's bandage, if the bandage alone had not sufficed to coagulate the blood.

(To be concluded.)

ON THE PHYSICAL DEVELOPMENT OF CHILDREN;

OR, THE BEARING OF ANTHROPOMETRY TO HYGIENE.

By PERCY BOULTON, M.D., M.R.C.P. LOND.,
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BOTH in England and abroad much attention has of late been devoted to the study of anthropometry, and in its medical aspect I have for many years worked at the subject. I believe that it is likely to become a most valuable aid in preventive medicine, and merits the attention of everyone interested in the healthy growth and development of children.

A profession as far-reaching as the medical embraces everything that has to do with man materially in health and disease. It is chiefly owing to improved medical and surgical skill, together with sanitary science, that in recent years the value of life has been so considerably enhanced, and by prevention of disease we are further able to do much towards raising man to the full perfection of his physical being, so that the whole race should become by degrees man for man nearer the ascertained healthy type. From the physical point of view it is during the period of growth that mischief is done or can be averted, and hence the value of a reliable standard of height for weight during that period of childhood which lies between three and five feet. During this stage the arrested growth, if discovered, can generally be remedied, and if weighing and measuring were more systematically practised it would rarely escape notice.

When I commenced weighing and measuring ten years ago correct averages were unknown to me, and I had no idea how much a child should grow in a year, so that the scales and measure were practically useless. This child

seemed healthy and fat, that one thin, and the other a fair average, and the same as to height. I searched for some guide, and came across the work of Professor H. P. Bowditch of Harvard University, Quetelet of Belgium, and others in England, which was a sufficient guarantee that the subject was of importance.

Quetelet's conclusions summarised came to this:—1. That there is a perfect form or type of man, and that the tendency of the race is to attain that type. 2. That the order of growth should be *regular* towards the type. 3. The variations from the type follow a definite law, the law of accidental causes. These conclusions commended themselves to me, but Quetelet, Bowditch, Galton, and Roberts all treat the subject from the anthropological point of view, treating man as he is in the mass. Their statistics must be so mixed up with disease and all other accidental causes of variation, that their tables cannot be looked on as standards of health. Their method is to weigh and measure *once* large numbers of children as found together at public schools or in factories, and to classify them in columns according to *age*, and then to strike the mean of the whole number. Thus, boys between ten and eleven years were found to measure from 42 to 59 inches (a difference of 17 inches between the shortest and tallest). As 1943 children examined were arranged in columns, and the greater number fell into column 50 to 51 inches in height, this is taken to be the standard or average for boys from ten to eleven years. This, I think, shows the fallacy of an age standard, for while 331 fell into this column, 1612 were "out of it" altogether, 816 being below and 796 above the mean.

The work of Roberts is very elaborate and complete. Having examined 50,000 factory and other children, these tables are no doubt correct standards of the physical averages of such children, and form a more reliable guide as to their capacity for work than certificate of age, which is the most unreliable of standards. The Acts of Parliament require that every *child* shall have the strength and appearance of at least eight years of age, and a *young person* at least that of thirteen years, for employment in their several capacities. The necessity, therefore, of a standard of physical averages at these ages is evident. Roberts's tables are intentionally fixed at the lowest point of physical fitness for work, which renders them unreliable as a typical standard for healthy English children brought up under favourable circumstances. A glance at the difference of physique between the children of the poor in a manufacturing district and of those that can afford to feed and care for their children well, is sufficient to convince that our standard must be higher than any average taken from such a source. As a fact, I have found my averages come out higher in both height and weight. In Belgium, America, and England, up to twelve years of age boys and girls average about the same height and weight. In America, Professor Bowditch says that girls are taller and heavier than boys. In Belgium they are the same at twelve years, and in England I find that, for all practical purposes, they may be taken together up to 5 feet. After 5 feet there is an appreciable difference, as girls arrive at puberty and cease growing sooner than boys.

Seeing that an age standard is perfectly unreliable, and that healthy children vary so much in height, it appeared likely to me that there are varieties of types depending on different rate of growth; so the first two points that I set myself to decide were—1. The rate of growth per annum of average healthy children. 2. Their weight for height. Instead, therefore, of making 200,000 *single* observations, as done by Bowditch and Baxter in America, I have examined the same children at least once annually, and kept careful records of the results over a space of ten years. In order to get a typical standard of weight for height the children were selected as average children of healthy well-to-do parents, brought up with suitable food and surroundings, giants and dwarfs being excluded. By this means I have been able personally to watch and record their rate of development under identical circumstances, and to glean interesting and reliable information on some points.

The table which I have drawn up may be looked upon as a typical standard for weight and height, and as it should be our aim to see every unit of the population brought up to the maximum of healthy development, I believe it will be found a reliable guide, subject to other statements which I shall shortly make. Observations of weight without height are of no scientific value, so that in this, at any rate, our clever artist, Mr. Marks, is right in the assertion that "science is measurement."

The masses of figures that have had to be digested in drawing up my table would be dry and difficult to follow, so I shall only give results.

Annual rate of growth.—The fact that different healthy children grow at different rates explains the circumstance of varying height in healthy individuals. I find that average English children brought up under favourable circumstances grow from 2 to 3 inches a year. A growth of less than 2 inches or over 3 should excite apprehension. The former would indicate arrested development, and the latter a rate of growth beyond the powers of average children. Rate of growth should be regular, and being so, prognosticates future stature, because the healthy child that grows 2 inches a year passes 5 ft. at about fifteen, which indicates a short stature (i.e., if a male, about 5 ft. 6 in.; female, about 5 ft. 1 in.). The healthy child growing 2½ in. a year is 3 ft. 2 in. at three years, and passes 5 ft. at thirteen to fourteen years. Such child will be a medium-sized adult (i.e., if a male, about 5 ft. 8 in.; female, about 5 ft. 3 in.). The quick-growing healthy child that accomplishes 3 in. a year passes 5 ft. at ten or eleven, and eventually makes a tall adult (i.e., if a male, about 5 ft. 10 in.; female, about 5 ft. 5 in.). So rate of growth might be likened to three trains travelling at, say ten, twenty, and thirty miles an hour; the fastest train, of course, covers the most ground in a given time, subject somewhat to the exact point where puberty puts on the brake, which at first slows, and ultimately stops the progress altogether. Of course, one meets with many variations, but these variations are, I believe, always abnormal. Some children seem to do their growing by fits and starts, the common diseases of children arresting for the time their progress, which is made up for afterwards by a supreme effort. Such growth is unnatural and often very detrimental. I believe, then, that every healthy child has its own regular rate of growth of 2, 2½, or 3 in. a year, from which it has no right to vary more than ½ in. a year.

Next as to weight for height. Whether a child grows 2, 2½, or 3 inches a year, weight for height should be in each case identically the same, and all healthy children should grow broad in proportion to their height. Between 3 and 4 feet the increase in weight should, I find, be 2 lb. per inch, and between 4 and 5 feet 2½ lb. per inch.

I do not wish it to be thought that the table which I offer as a standard is a precise statement of what has come out of my statistics. I wish it to be understood that statistics do not accommodate themselves to the regularity of half-pounds, as found in this table. An observant and accurate statistician may, however, very easily lay down a law from the facts and figures which he has to deal with. It is a fact that my statistics came out 2 st. 8 lb. for 3 feet, and 4 st. 4 lb. for 4 feet, and 6 st. 6 lb. for 5 feet, and having found 2 lb. per inch to be the normal increase between 3 and 4 feet, and 2½ lb. per inch between 4 and 5 feet, the rest naturally follows, and has proved a reliable approximate working standard.

Feet	In.	st.	lb.
3	0	2	8
3	1	2	10
3	2	2	12
3	3	3	0
3	4	3	2
3	5	3	4
3	6	3	6
3	7	3	8
3	8	3	10
3	9	3	12
3	10	4	0
3	11	4	2
4	0	4	4
4	1	4	6½
4	2	4	9
4	3	4	11½
4	4	5	0
4	5	5	2½
4	6	5	5
4	7	5	7½
4	8	5	10
4	9	5	12½
4	10	6	1
4	11	6	3½
5	0	6	6

Some children exceed these weights that are by no means giants; and really healthy, well-nourished children of healthy

parents and favourable surroundings generally attain these averages. But what of children that fall below the standard? I find that there is a 7 lb. margin of safety, and that children falling more than 7 lb. below this standard are devoid of reserve capital on which to draw, and consequently they succumb quickly to many constitutional diseases. This, therefore, may be called the preventive medicine margin, beyond which lies the dangerous land of cachexia.

Arrest of growth, or loss of weight, precedes so many diseases that it may be looked upon as a danger signal, and if the "caution" is noticed before the disease point is reached catastrophe may frequently be prevented, and so childhood may be worked on a kind of "block system." It is thus that it becomes of such value in preventive medicine.

In pulmonary consumption loss of weight generally precedes cough, and, according to Dr. Dobell's table No. 4, hæmoptysis only occurred 8 times out of 100 cases before loss of weight had been noticed. Moreover, while cough is a symptom at once recognised and noticed, loss of weight is so insidious that it is apt to go some time unnoticed. The number of cases in which loss of weight began before cough is sure to be understated. These remarks apply more strongly to the cases in which loss of weight preceded first hæmoptysis—a symptom never overlooked.

I have been glad to notice that lately there have been evidences in various quarters that this subject is attracting attention. At the International Congress at Amsterdam Professor Donders in his most eloquent address said, that "the principal aim of hygiene is contained in the factors—the desire to raise man to the full perfection of his physical and moral being, the principles of gymnastics, that are yet but little known, the doctrine of heredity, the influence of consanguinity," &c. Dr. Zeeman, of Amsterdam, in speaking of the best methods for measuring public health, dwelt on "the physical development of infants and youths, and the results which have partly been obtained, or will be obtained in the future, by a series of careful investigations, which are classified under the name of anthropometry." At the meeting of the British Medical Association at Cork Dr. Rabagliati touched on the same subject.

As a practical example of what has been done through the knowledge of a physical standard, let me instance what occurred at the Boys' Home, Regent's-park. In 1875 it was found at that institution that the boys had not increased on an average two inches a year, so in January, 1876, a revised dietary was used, and it was found, after one year, that by this simple change the average increase amongst the boys had been over two inches in stature, and 6¼ lb. in weight.

It is not possible in this paper to go into the question *how* the standard is likely to be more generally attained; but, speaking broadly, the principles of sanitary science, food, clothing, work, rest, pure air—in short, the proper bringing up of children is the foundation. It is merely stating a truism to say that suitable food and surroundings are necessary for the healthy development of every living thing; and that overwork of the young, whether mental or bodily, ill-feeding, sickness, hereditary diseases, and the like, cause children to be puny and fall below their proper averages. Diseased and diminutive parents are apt to procreate undersized and unhealthy offspring, which nothing will make grow up to a typical standard, for the embryo receives a stamp at the time of conception which would baffle all our subsequent efforts for its welfare. But children born of healthy parents are constantly being added to the roll of the weedy and undersized owing to want of care during the growing years. For all such the scales and measure offer indications of no mean value. Much might be done by sanitary, medical, and general inspection of children's homes, and by establishing child-colonies, as in Switzerland, America, and Saxony.

Our school boards might become a great power for the physical improvement of our rising population, if some of the monstrous sum expended in teaching our labourers and servants of the future the rudiments of science, mathematics, and German were utilised during school vacation in sending the undersized to the country under the care of their teachers, and opportunity were afforded them to become physically strengthened by judiciously regulated diet, plenty of exercise in the fresh air, &c.; if, in short, a little less were done for the *mens sana* and a little more for the *corpore sano*. It is perfectly wonderful what only three weeks of change to the country has been found to do for town children thus treated in Saxony. In Switzerland and America the children are placed in the families of farmers, who take charge of them for a small sum—a system of "farming out" not as yet known, I am sorry to say, in this country.

The medical inspection of schools which has been instituted in the department of the Seine is a step in this direction which might be imitated in this country with advantage, and I would strongly urge the triennial use of the scales and measure as the most trustworthy indicators of the physical welfare of the rising population. There is little doubt that the mental pressure which is now so common in elementary schools causes an excessive waste of nerve force for mental work, which should be subservient to bodily growth and development. Mental overstrain is most common amongst the poor who suffer from want of food and bad hygienic surroundings, but it is not uncommon amongst the growing children of the rich; and it is important that parents should be aware of the possibility of sacrificing physical to mental development. The reverse may certainly occur, the result being a fine but not very intellectual animal; and therefore in this, as in most things, it is the "happy medium" that is the best and safest.

Seymour-street, W.

CASE OF CEREBRO-SPINAL MENINGITIS; DEATH AND AUTOPSY.

By TOM ROBINSON, L.R.C.P. LOND., &c.

A. G——, aged eight, was a cheerful and intelligent schoolboy. Father and mother both living and healthy; have four other children all living and well. On July 21st whilst at school the mistress noticed that he was dull and sleepy, but he got through his lessons in the morning and came home crying with pains in his head. His mother gave him castor oil, after which he vomited.

On July 22nd he was quite delirious, complaining of intense pain in his head. On the evening of this day I saw the boy and found him lying in bed and on his back. He was rolling his head about and complaining of great pain. I did not distinguish any irregularity of pupils or paralysis of muscles of eyeball or elsewhere. He was extremely irritable. No evidence of any disease or eruption. Temperature 102·2°; pulse 126; respiration 32.

July 23rd.—His right eye attracted my attention on going to his bedside. The pupil was very dilated, insensible to light, and the cornea looked steamy. He was still lying on his back, moaning and complaining of pain in his head, particularly when moved about. He said he could see a candle, but he could not count my fingers or tell those around him. Temperature 102·2°; pulse 103; respiration 31.

24th.—Mr. Hutchinson saw the case with me. On his first visit the patient was lying on his back with the knees drawn up, almost touching the chin, very delirious, and screamed violently on being disturbed. The steaminess of the right eye had become opacity, and from the evidence we concluded he was blind on this side. There was marked increased tension of the globe. Temperature 103°; pulse 124; respiration 30.

25th.—Head thrown back and very fixed. His gums were inflamed from repeated doses of calomel. His eye was much the same. Temperature 102·2°; pulse 128; respiration 30.

27th.—Quite conscious. Slept well during the night. His left eye was normal, but with the right he was totally blind, and the iris was invisible. Temperature 100°; pulse 120; respiration 30.

31st.—His condition had not much changed. He had slept for long periods both night and day. Complained of great pain when he was moved. Could lie on either side, but his head was always drawn back, and he resisted any effort to flex it. Temperature 99°; pulse 120; respiration 30.

Feb. 2nd.—I made the following notes: "On the right eye there is marked bulging on the upper aspect, which bulging is brown. I can now see through the cornea, and discern the iris distinctly, but there is an opaque patch on the cornea which obscures the pupil. He is conscious, does not like to be disturbed, and says his legs pain him. Temperature 100°; pulse 120; respiration 24."

10th.—Wasting very rapidly, but more cheerful. The bulging on the globe is less; the cornea is more transparent;

the pupil is triangular. The vision of the left eye remains good. Temperature 96·2°; pulse 110; respiration 20.

14th. — Dr. Wilks saw the case in consultation with me. On our visit the boy was cheerful, was lying on his left side, and had no pain or difficulty in turning from side to side, but moved his head and shoulders as if fixed. He complained of pain in his neck. When he sat up his head seemed too heavy for his body, and he begged of us to put him on his pillow. With the exception of the right eye, there were no other discoverable physical signs. Temperature 97·6°; pulse 108; respiration 20.

21st. — Quite conscious. Often complains of cold, and when he does so his cheeks look like gooseflesh. When asked to sit up he says he cannot. If an attempt is made to lift him he cries, but his head may be rotated and extended without any resistance. Vomits after food. Complains of the slightest noise. Temperature 98°; pulse 107; respiration 21.

March 2nd.—Has not slept all night, and was wandering incessantly, lying on his right side, with his legs drawn up. The right eyeball is getting smaller, but is quite sightless. Temperature 102·8°; pulse 110; respiration 22.

12th.—Since the last note he has been very irritable and restless. Has complained much of pain in his head, and asks to be left alone. He vomited at frequent intervals. Is delirious at times. Picks his face, and chatters a great deal incoherently. Temperature 98·4°; pulse 100; respiration 20.

19th. — Seems very much better. Answers questions rationally. His hearing and sight of left eye seem quite normal. He takes his food, and does not vomit. Still looks extremely ill. Temperature 99°; pulse 98; respiration 22.

26th.—Since the last note his right eye has given way in the upper aspect, and is discharging pus. Complains bitterly of his head, particularly when moved. Temperature 99°; pulse 110; respiration 24.

April 10th.—He has not exhibited any material alteration since the last note was made. He looks very careworn and old. Has incontinence of urine and fæces, and is terribly thin. There are some aphthous patches in his mouth. He will answer questions, but the response is slow and monosyllabic. Temperature 98°; pulse 124; respiration 22.

16th.—There is a band of herpes over the sixth right dorsal nerve. There are on his abdomen a number of purple spots, which do not disappear on pressure. The saliva dribbles from his mouth, and over his body in such positions as the helix the skin is dead, but only the skin. When he is raised his head falls back, and he cannot move it without assistance, at least he does not. Temperature 99·2°; pulse 126; respiration 24.

21st.—He goes scarlet in his face at times. Is absolutely unconscious to reflex action or questioning. Breathing in short rapid gasps, which are irregular. Sweats on the least exertion. Swallows with great difficulty. He died during the night. Temperature 99·8°; pulse 144; respiration 68.

Autopsy, twenty-four hours after death.—The body was very much wasted, and the muscles about the neck appeared more so than any other part of the body, the transverse processes of the vertebræ standing out in relief as the body lay on the table. The abdominal and thoracic viscera were healthy. Head: The pia mater on the surface of the brain was shining and normal, but as you looked towards the base of the brain this membrane became greasy, which greasiness gradually became opacity, and on the under surface, matting together the optic commissure and other structures, was an opaque covering, which was firm. This opacity was continued on each side into the Sylvian fissures. The convolutions of the brain were flattened. The lateral ventricles were much distended by about six ounces of thick fluid. There was no evidence of tubercle or injury to the skull. I was forbidden any examination of the spinal cord.

The points of interest in this case are three.

1. The destructive process which so suddenly attacked the eyeball.

2. The cutaneous conditions which arose during the boy's illness.

3. The want of evidence as to the cause of the meningitis.

The first two, I think, must be attributed to alteration in nerve-function. I have seen cases where, after affections of the brachial plexus, either from injury or other causes, the fingers have become withered and glazed, and one need scarcely say how much modern pathology has done to demonstrate the connexion between nerve changes and several forms of skin disease. In the museum of St. Bartholomew's (Series 9, No. 9) is a case of penetrating ulcer of the cornea, which occurred in a case of tumour near the pons, which tumour destroyed the trunk of the trigeminal. And Sir James Paget writes in his work on Surgical Pathology, "It is well-known that when the trigeminal nerve is divided the eyeball inflames, so that within a few days its textures may be greatly injured, or even destroyed, by the inflammation."

I have under my care at the present time a young lady whose fingers and toes are an indigo blue, which blueness disappears on pressure, is not changed by position, but passes away when she has been near the fire for some time. Her fingers are very painful and she cannot feel the pricking of a pin. This patient has cherry-coloured lips and is free from organic disease of heart; so we must believe she has, from cold, a paralysis of those nerves which govern the arterio-capillary venous network, which vessels are simply, as Dr. W. H. Stone has shown, closed cells. So that I think I am justified in stating that the destructive inflammation which took place in my patient's eyeball was due to the destruction, or partial destruction, of the trigeminal nerve by the inflammatory process which took place at the base of his brain; and I apprehend his herpes zoster and his cutaneous gangrene were attributable to the same action, involving other nerves.

In the absence of any history of an injury, or growth, or fracture of skull, one is compelled to accept this as a case of idiopathic cerebro-spinal meningitis, such as is described by Niemeyer under the term epidermic, and by many other writers, and it is found that isolated cases have been reported from time to time. Thus Dr. B. W. Richardson saw an unquestionable case at Mortlake in 1843 (*Social Science Review*, May, 1865, p. 398). Dr. Wilks has reported cases which he has met with during each of the three years 1856, 1858, and 1859, in London, and I remember a case occurring in the London Hospital during the year 1870. The difficulty arises as to whether the case I have ventured to make public is a true example. It certainly presented all the objective symptoms, and the pathological evidence would demonstrate that it was a cerebro-spinal meningitis.

Guilford-street, Russell-square.

FIVE YEARS' SURGICAL WORK IN THE CARDIFF INFIRMARY.

BY ALFRED SHEEN, M.D.,
SURGEON TO THE INFIRMARY.

(Continued from p. 553.)

Dislocations.—Under this heading there are but few entries, chiefly because dislocations as a rule are dealt with as out-patients. The elbow case had a stiff bandage applied in ten days, and was made an out-patient. It was a dislocation backwards, complicated by fracture. The shoulder cases were both of some standing—one being thirty days, and the other nine months. The first was in a man aged fifty-four, and was reported in THE LANCET at the time.[1] On admission, there was flattening of the left shoulder, prominence of the acromion, lessened mobility of the arm, which was somewhat from the side, and pain on trying to raise it. No swelling or crepitus; slight prominence in front of the joint; head of the bone to be felt in the axilla. The patient was placed fully under the influence of chloroform, the limb was manipulated to break down any adhesions which had formed, and reduction attempted, but without success. A further examination of the limb was then made, and on rotating the arm with my fingers placed on the head of the bone the latter was found not to move. The diagnosis was: original accident, fracture of the neck with dislocation, and now disturbance of fractured ends. In Guy's Hospital Reports for 1875, p. 132, I find a somewhat similar case thus recorded:—"Mr. Howse attempted to reduce an unreduced subcoracoid dislocation of the right humerus of one month's standing. With the patient under chloroform, Mr. Howse attempted to violently break down the adhesions, and in doing so fractured the humerus, pro-

[1] Vol. i. 1876, p. 221.

bably at the surgical neck. Attempts were afterwards made to reduce it with the heel in the axilla, but without success. "The lower fragment slipped up somewhat in the normal position of the humerus, whilst the head remained fixed in its subcoracoid position." Mr. Jonathan Hutchinson subsequently made some comments on my case,[2] with a view of showing that it was most probably one of fracture of the neck without dislocation. I have seen cases of fracture of the neck since, and I am still inclined to believe that the case I have here commented on was a fracture *plus* dislocation, although this may be a rare accident, and such was the opinion of my colleagues who saw the case in consultation. The chief point upon which I relied was the fact that the head of the bone was felt *in the axilla after* the fracture had occurred. The second case was in a woman, aged sixty. On making an attempt at reduction under chloroform, I broke the bone at the neck, it giving way with a loud snap. The arm was brought to the side, which could not be done before, and the patient was subsequently discharged with a fair amount of motion, and satisfied with her condition. There was no snap of any kind in the first case, and this helped to confirm me in my diagnosis of that case.

DISLOCATIONS.

	Under ten.		Under twenty.		Under forty.		Under sixty.		Over sixty.		Totals.	
	M.		M.		M.	F.	M.		F.		M.	F.
Shoulder	0	..	0	..	0	0	..	1	..	1	..	1	1
Elbow	0	..	0	..	0	1	..	0	..	0	..	0	1
Clavicle	0	..	0	..	1	0	..	1	..	0	..	2	0
Hip	1	..	1	..	1	0	..	0	..	0	..	3	0
Ankle	0	..	0	..	1	0	..	0	..	0	..	1	0
	1		1		3	1		2		1		7	2

Both *clavicle* cases were dislocations of the acromial end, which Mr. Bryant, following Skey, Maclise, and Flower, says should be called dislocation of the *scapula*. They were both caused by direct violence, and were admitted within a fortnight of each other. One case was put up in a stiff bandage, and the other in broad strapping under the elbow and over the shoulder. The dislocated *hip* in a child was of eight months' duration, and was interesting in more ways than one. At the time of the accident the child was taken to a chemist, who, of course, failed to recognise the nature of the injury, but had the audacity to treat it as something which it was not, and for a month previous to admission it was treated by a medical man, who presumably ought to have known better, as a case of hip disease, and was sent into the infirmary for the purpose of having a stiff bandage applied. No attempt at reduction was made, as a false joint had formed, and the child had good use of the limb. The second case of hip disease was of eight weeks' standing, and an attempt at reduction under chloroform failed.

FRACTURES: SIMPLE.

	Under ten.	Under twenty.	Under forty.	Under sixty.	Over sixty.	Totals.	Deaths.
Skull	1	2	0	0	0	3	2
Spine	0	0	3	1	1	5	5
Lower jaw	0	0	1	0	0	1	0
Clavicle	0	1	0	0	0	1	0
Scapula	0	0	0	0	1	1	0
Humerus	2	3	1	0	0	6	0
Radius	0	0	1	0	0	1	0
Radius and ulna	0	2	0	0	0	2	0
Ulna	0	0	1	0	0	1	0
Ribs	0	0	2	3	1	6	2
Pelvis	0	0	0	1	0	1	1
Femur	10	3	5	3	2	23	0
Tibia	5	0	3	0	0	8	0
Fibula	2	1	0	2	0	14	0
Tibia and fibula	0	4	16	7	1	28	0
Patella	0	0	0	3	0	3	0
Both legs and right femur	0	0	1	0	0	1	0
	29	16	43	20	6	105	10

Of *simple fractures* there are 105, 90 being males and 15 females. The proportion of females is unusually small, and this is due in some measure to the absence of those industries where women would be employed. I think there is only one such establishment in this neighbourhood—a paper mill; but although many accidents occur here they are all amongst men, and this is probably due to the fact of the women being kept out of the way of the machinery.

Two of the cases of fractured skull died within twenty-four hours of admission, one being admitted in a moribund state. All the cases of fractured spine died, three within twenty-four hours of admission. The case of fractured pelvis was interesting. It was in a painter, aged forty-eight, who fell thirty feet whilst painting on the second landing of a staircase, coming down on his buttocks. When admitted he had intense pain in the pelvis, much bruising in the sacral and coccygeal regions, partial loss of power over the lower extremities, and contusion in the right iliac region, with crepitus on pressing both sides of the pelvis. His easiest position was a prone one. When a catheter was passed, a few hours after admission, half an ounce of dark-coloured urine was drawn off. After a further interval of some hours half an ounce of clear urine was drawn away. Next day he passed half a pint of clear urine. Eleven days afterwards there was a bedsore over the sacrum, although he had been on a water-bed since admission, and redness and swelling over the left iliac region, extending upwards, and his temperature went up to 101° F. An abscess formed in the loin, and in nine days broke, giving exit to about one pint of pus, followed by a quantity of clear urine, and his temperature became normal. In twenty-four hours two pints and a half of clear urine escaped from the opening through a drainage-tube, and none came per urethram. He died exhausted three days after. I suppose that in this case the left ureter had been ruptured, but unfortunately the body was allowed to be taken away by the friends without a post-mortem.

As to treatment in cases of fractured thigh, Lister's long splint was almost invariably used at the commencement, and a stiff bandage applied as soon as possible, varying from six to twenty days after the receipt of injury, with cure, and in most cases little or no appreciable shortening. One case of fracture of both thighs in a child aged four and a half years was treated by slinging his limbs, as recommended by Hamilton in his work on "Fractures and Dislocations," and afterwards by stiff bandages. He was running about the ward five weeks and a half after the accident, but the limbs were not quite straight. The case of fracture of both legs and one thigh was sustained in a railway collision, and did well, the patient being discharged fifty-five days after the accident. The cases of fractured patella were treated by simple elevation of the limb, to take off all strain of the muscles, and as soon as all swelling had disappeared a stiff bandage was applied. The results were admirable. Fractures of the leg were mostly treated by Cline's splints, and the early application of a stiff bandage. The average stay in hospital of such cases, where there were no complications, was fifteen days. I am a strong advocate for the early application of a stiff bandage in simple fractures of the limbs. They may be put on with advantage immediately after the accident, if there be little or no swelling; in other cases, so soon as the swelling has subsided. This treatment enables the patient to take early exercise, which is beneficial to himself, and the surgeon to make an out-patient of him at an early date, which is a great gain to the funds of the institution. Up to quite recently we have used a mixture of *gum and chalk*, which forms a capital support of the requisite strength, but since the introduction of muslin bandages we have used *plaster-of-Paris* applied over a stocking. These bandages are preferable, because the limb can be held in position whilst the plaster sets.

Of *compound fractures* I have had the large number of sixty-six cases, and more than one-third of these were what I may call "railway smashes." The Great Western line runs through the town, and in addition we have the termini of the Taff Vale and Rhymney railways, and from the former of these two most of our serious accidents are supplied. Although an admirably managed line it is a dangerous one to the workmen employed, and this familiarity with danger makes them somewhat careless. More than half the cases were of such a serious nature as to require immediate amputation, and remarks upon these cases are given under the heading of "Amputations for Accident." One or two cases I may draw attention to.

No. 26.—G. T. S——, aged fourteen, fracture of femur. Carbolic-acid lotion, one to twenty, was injected into the wound, which was, after the lotion had drained out, sealed with styptic colloid, and Liston's long splint applied. Cline's splints were applied to the fractured leg. The patient did well, and two months after his discharge the report upon him was, "Can walk as well as before the accident; no shortening."

No. 64.—P. M——, aged fourteen. Compound fracture of humerus and radius, put up antiseptically; five dressings; bony union and fair position in twenty-three days.

[2] THE LANCET, vol. I. 1876, p. 341.

No. 46.—J. Y——, aged thirty-two. Compound fracture of leg. Put up antiseptically; five dressings. Stiff bandage in twenty-four days. Temperature chart, a straight normal line throughout.

No. 41.—W. E——, aged fifty-three. Compound fracture of leg. Wound sealed with styptic, and a stiff bandage applied in fourteen days.

FRACTURES: COMPOUND.

No.	Age	Sex	Part.	Side	Result.	Days in hosp.	Treatment of wounds &c.
1	34	M.	Clavicle	R.	C.	40	Styptic colloid
2	5	M.	3 fingers	—	C.	12	Boracic ointment
3	4	M.	2 ,,	—	C.	41	Amputation
4	35	M.	1 ,,	—	C.	30	——
5	18	M.	1 ,,	R.	C.	12	Amputation
6	56	M.	Thumb	—	C.	12	Carb. oil
7	19	M	4 fingers	R.	C.	12	Amputation
8	17	M.	Thumb & 2 fing.	R.	C.	27	,,
9	20	M.	Thumb	L.	C.	24	,,
10	18	M.	1 finger	—	C.	4	,,
11	16	M.	2 fingers	R.	C.	16	,,
12	16	M.	Hand	L.	C.	—	,,
13	36	M.	,,	R.	C.	28	,,
14	20	M.	,,	L.	C.	21	,,
15	14	M.	,,	L.	C.	13	,,
16	16	M.	3 fingers	R.	C.	—	,,
17	41	M.	Lower jaw	—	C.	40	Gutta-percha splint; dead bone
18	42	M.	,,	—	C.	19	,,
19	22	M.	Lower jaw &c.	—	C.	15	,,
20	19	M.	Nasal bones	—	C.	7	Water dressing
21	38	M.	,,	—	D.	1	Brain injury
22	30	M.	,,	—	C.	22	Carb. oil
23	45	M.	Chest	—	D.	6 hs.	——
24	44	M.	Skull	—	D.	2	——
25	27	M.	Femur	R.	D.	3	Antiseptic
26	14	M.	Femur and simple right leg	L.	C.	53	Carb. oil and styptic
27	18	F.	Femur & rt. foot	L.	D.	2	Amputation
28	—	M.	Femur	L.	D.	3 hs.	,,
29	40	F.	Legs	both	D.	10 hs.	Double amputation
30	31	M.	,,	,,	D.	1	Amputation
31	18	M.	,, ,,	,,	C.	46	Antiseptic; secondary amputation of thigh
32	38	M.	,,	,,	D.	21	Double amputation
33	58	M.	,,	,,	D.	—	Admitted moribund
34	39	M.	Legs & int. inj.	,,	D.	—	,,
35	32	M.	Tibia, fibula	R.	C.	76	Antiseptic
36	19	M.	,,	L.	C.	34	Amputation
37	15	M.	,,	L.	C.	82	Carb. oil
38	10	M.	,,	R.	C.	36	Amputation
39	11	M.	,,	L.	D.	3 hour	Hæmorrhage
40	15	M.	,,	—	D.	1	——
41	53	M.	,,	—	C.	20	Styptic colloid
42	52	F.	,,	—	D.	1	Amputation
43	15	M.	,,	R.	C.	47	,,
44	14	M.	,,	R.	C.	56	,,
45	60	M.	,,	L.	C.	37	,,
46	32	M.	,,	R.	C.	29	Antiseptic
47	—	M.	Do. (simple)	L.	C	146	Carb. oil; erysipelas, rheum., endocarditis
			Tibia, fibula	R.			
48	25	M.	Do. (simple)	L.	C.	110	Antiseptic, delayed union
49	46	M.	Tibia, fibula	—	C.	152	Secondary amputation
50	72	M.	,,	L.	D.	20	Carb. oil; pyæmia
51	35	M.	,,	L.	C.	51	Carb. oil
52	22	M.	,,	R.	C.	35	Amputation
53	60	M.	,,	R.	D	1 hour	,,
			Foot	L.			
			Hand, forear.	R.			
54	46	F.	Ankle-joint	L.	R.	192	Antiseptic
55	23	M.	Foot	L.	C.	93	,,
56	44	M.	,,	R.	C.	63	Amputation
57	25	M.	Toe	—	C.	45	,,
58	14	M.	,,	L.	C.	32	Secondary amputation
59	41	M.	Toes	R.	C.	32	Amputation
60	40	M.	,,	R.	C.	25	Carb. oil
61	40	M.	Humerus	R.	C.	30	Amputation
62	29	M.	,,	R.	C.	—	Styptic colloid
63	22	M.	Elbow-joint	L.	C.	34	Amputation
64	14	M.	Hum. & radius	R.	C.	34	Antiseptic
65	23	M.	Radius & ulna	—	C.	7	,,
66	14	M.	Radius	R.	C.	17	Amputation

As to cause: Nos. 12, 16, 17, 18, 21, 23, 24, 25 to 34 inclusive, 36, 37, 38, 42, 44, 51 to 59 inclusive, and 63, were railway accidents; 14 was from a gun explosion; 39 from a reaping machine; the remainder occurred in various ways.

There were sixteen deaths. Of these two were admitted moribund; one, a smashed chest (No. 23), died in six hours. In No. 25, a severe compound fracture of the thigh, an attempt was made to save the limb by antiseptic treatment, but the injuries to the soft parts were so great that gangrene supervened, and the patient succumbed on the third day. In No. 21 there was, no doubt, injury to the brain. No. 50, a compound fracture of the leg, died in twenty days from pyæmia. No. 39 is a fair illustration of the dire results which sometimes happen from the prevailing ignorance of the immediate and temporary treatment of injuries, an ignorance which the St. John's Ambulance Association is making most praiseworthy efforts to get rid of. The patient, a boy, aged eleven, got his foot cut off by a reaping machine. His leg was tied up in some fashion. He was driven in a cart to the infirmary, a distance of six miles. There was much bleeding on the way, and the poor boy died half an hour after admission. Of course, we have much more serious accidents in railway smashes, but in these, the wounds being lacerated, the vessels are mostly twisted, and serious hæmorrhage, as a rule, prevented. Case No. 53 was that of a gentleman who was deaf and dumb, who strayed on to the railway, and was knocked down by an advancing train from behind, whose approach he was unable to hear. He was dreadfully injured, and died just as a lower limb had been separated from the trunk, and the stump trimmed.

The treatment of these cases of compound fracture has been of various kinds. Where there is not much damage to soft parts, and the bones are easily kept in apposition, *styptic colloid* is always a favourite application with me, with a view to closing the wound, and in some cases it has answered admirably. The "antiseptic treatment" has been fully carried out in some cases, imperfectly in others. It is one of the disadvantages of this treatment that unless you give *personal* attention to all its details you cannot ensure that amount of success which, I think, fairly belongs to it. So far as I have practised it I should give it the palm over every other kind of treatment, as tending to remove all fear and anxiety as to constitutional disturbance and bad symptoms. I should not be guided much by statistics with reference to the antiseptic treatment. We all know what tedious cases compound fractures were, as a rule, previous to the introduction of "Listerism," and many of us know now how differently these cases progress, and are able to appreciate at their proper value the lessons which Professor Lister has taught us. Whether his *method of practice* is the best which can be devised probably remains to be decided hereafter.

AMPUTATIONS: ACCIDENTS.

No.	Age.	Sex.	Part.	Side.	Nature of Operation.	Result.	Days in Hosp. aft. Operation.	Dressings, &c.
1	4	M	2 fingers	—	Flaps	C	40	——
2	18	M	1 ,,	R	,,	C	13	Carbolic oil
3	19	M	4 ,,	R	,,	C	12	,,
4	18	M	1 ,,	—	,,	C	4	,,
5	16	M	2 ,,	R	,,	C	16	,,
6	16	M	3 ,,	R	,,	C	—	,,
7	17	M	Thumb & 2 fing.	R	,,	C	27	,,
8	30	M	Thumb	L	,,	C	24	,,
9	16	M	Partial hand	L	,,	C	—	,,
10	26	M	,,	R	,,	C	28	,,
11	20	M	Low.3rdforearm	L	Mod. circ.	C	21	,,
12	14	M	,,	L	Flaps	C	18	Styptic colloid
13	14	M	Up. 3rd forearm	R	Mod. circ.	C	17	Carbolic oil
14	40	M	Upper 3rd arm	R	,,	C	20	Antiseptic
15	22	M	Middle arm	L	Skin flaps.	C	34	Carbolic oil
16	41	M	Toes	R	,,	C	32	,,
17	14	M	Great toe	L	Flaps	C	33	Carbolic water
18	25	M	Tarso-metatars.	—	Mod. circ.	C	45	——
19	44	M	Chopart	R	Flap fr. sole	C	68	Carbolic oil
20	51	M	Tarsus	R	,,	C	45	Styptic colloid
21	46	M	Mid. 3rd leg	R	Mod. circ.	C	58	Carbolic oil, secondary
22	60	M	Below knee	L	,,	C	37	Antiseptic
23	22	M	,,	R	,,	C	25	Styp. colloid & carb. oil
24	19	M	,,	L	,,	C	34	——
25	31	M	Both legs	—	——	D	1	——
26	38	M	Lower 3rd leg	L	Mod. circ.	D	21	Carbolic oil
			Middle leg	R				
27	15	M	Knee	R	Carden	C	47	Antiseptic
28	18	F	Upper 3rd thigh	L	Skin flaps	D	1	——
29	27	M	Middle thigh	L	Mod. circ.	D	3 h.	——
30	52	F	Lower 3rd thigh	—	——	D	1	——
31	14	M	Middle thigh	R	Flaps	C	56	Antiseptic
32	18	M	Lower 3rd thigh	L	Mod. circ.	C	38	Antiseptic, secondary
33	10	M	,,	R	Skin flaps	C	36	Carbolic oil
34	60	M	Mid. forearm	R	,,	D	1 h.	——
35	40	F	Both mid. thighs	—	Mod. circ.	D	10 h	——

As to cause: Nos. 2, 3, 4, 5, 6, 7, 8, 13, 14, 27, resulted from machinery; Nos. 9, 12, 15, 16, 17, 18, 19, 23, 24, 25, 26, 28, 29, 30, 31, 32, 33, 34, 35, were caused by railway injury; and the remainder were due to various causes.

AMPUTATIONS: DISEASE.

No.	Age.	Sex.	Part.	Side.	Nature of Operation.	Result.	Days in Hosp. aft. Operation.	Dressings, &c.
1	4	M	2nd finger	L	Flaps	C	28	Carbolic oil
2	39	M	Finger	L	,,	C	5	Styptic colloid
3	17	F	Great toe	L	,,	C	18	Carbolic oil
4	35	M	Ankle	L	Syme	C	44	Terebene
5	51	M	Lower 3rd leg	R	Teale	C	26	Antiseptic
6	26	F	Below knee	L	Mod. circ.	C	41	,,
7	41	M	,,	R	,,	C	60	Carbolic oil
8	52	F	Lower 3rd thigh	L	,,	C	56	Antiseptic (atheroma)
9	54	M	,,	R	,,	C	40	,,
10	32	F	Thigh	R	Carden	C	80	Antiseptic (phthisis)
11	48	M	,,	L	,,	C	48	,,

The diseases for which the operations were performed were: No. 1, thecal abscess; No. 2, contracted tendon; No. 3, necrosis; No. 4, tarsus; No. 5, ulcer of heel; No. 6, gangrene from arterial plug after scarlet fever; No. 7, old pyæmia; No. 8, ruptured popliteal aneurism; Nos. 9, 10, 11, knee.

(To be continued.)

PREMATURE LABOUR INDUCED BY QUININE.

BY E. DOWNES, L.R.C.P. LOND.

IT is sometimes questioned whether quinine does or does not induce labour when given to pregnant women. It is not often necessary to give it in England; but in India, where ague is so common, it often becomes a serious question whether to give it or withhold it in pregnancy. A case has just occurred to me which bears out the idea that quinine does induce labour.

A lady placed herself in my hands; she expected her confinement at the latter part of August. In the middle of July she had bad fever, which, originally of an intermittent kind, showed a tendency to become continuous. I endeavoured, with some success at first, to keep off the fever by jaborandi and arseniate of quinine, without giving the sulphate of quinine. The amount of quinine in the arseniate was so small that I did not fear giving it. Nearly a month passed and the fever was so bad and intractable, and she became so weak, that I began to fear the consequences both to mother and child; so, on the 7th of August, I resolved to give quinine. I gave it in five-grain doses, which I ordered three times a day. She took two doses—one in the morning and the second at mid-day. At about 8 o'clock in the evening, without any warning, the "waters burst," and slight uterine pains came on. They were, however, very slight—so much so that she doubted whether she was in labour at all, until at about 11 o'clock the pains became a little stronger; one or two sharp pains succeeded, and the child's head, followed after a few moments by the body, was born. The placenta came away about half an hour afterwards without hæmorrhage. The child was very small, and looked as though it had been born a month before its time. A great deal of its skin peeled off, and after a week it became very much jaundiced, but it promises to do well.

There can be little doubt that the moderate doses of quinine which I gave caused the birth of the child, and under the circumstances it was perhaps the best thing that could have happened. But I shall be careful that I do not give quinine to a pregnant woman again unless I feel that I am obliged to do so. In the case which I have recorded I deliberately chose the induction of labour as a less dangerous alternative than the continuance of the fever.

Kashmir, India.

MR. PHILIP COWEN has received a gratuity of £25 from the Islington Guardians in "consideration of the heavy duties performed by him as the late resident medical officer of the workhouse and infirmary, pending the appointment of his successor and assistant."

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tam aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

CASE OF LYMPHADENOMA; OPERATION; RECOVERY.

(Under the care of Mr. GEORGE LAWSON.)

FOR the notes of the following case we are indebted to Mr. Duff.

Wm. C——, aged thirteen, a fair-haired, delicate-looking boy, was admitted into Pepys ward on April 20th, suffering from a large tumour of the lymphatic glands in the neck. The boy's father was subject to cough, but was otherwise healthy; his mother was also healthy. There were three sisters younger than the patient, all of whom were healthy. The boy had had whooping-cough, measles, and scarlet fever. About three years ago he first noticed that he had a small lump behind and below the right ear. The lump grew downwards until it reached a little below the clavicle. The mass then spread forwards and backwards. There had been no difficulty in swallowing, and no pain until about a fortnight before admission, when he first began to feel discomfort in the back part of the tumour. About twelve months ago he first noticed a swelling about the size of a marble in the left groin; this steadily increased in size.

On admission, there was on the right side of the neck a large tumour of a somewhat triangular shape, having its apex at the mastoid process of the temporal bone, and its base extended round the root of the neck. In front it passed slightly beyond the mesial line, and had pushed the larynx and trachea over to the left. Behind, it reached to within two inches of the spinous processes of the vertebræ. Below, the tumour overlapped the inner two-thirds of the clavicle, and extended down to the lower border of the second rib. The growth was crossed by the sterno-mastoid muscle, and was overlapped by the edge of the trapezius. The surface of the tumour was lobulated, and over the lower part the skin was reddened. It was apparently composed of a mass of enlarged glands matted together.

In the left groin there was a similar tumour, but very much smaller, about the size of a large horse-chestnut. The boy looked very pale and anæmic, his complexion being remarkably clear and semi-transparent, with a slight hectic

blush. He slept well and his appetite was good, but he complained that he soon tired when at play. Owing to the size of the tumour, his face was kept turned slightly to the left, and when he wanted to look to the right he had to

turn his body. Heart and lung sounds normal; blood examined by the hæmocytometer, 4,560,000 red corpuscles in cubic millimetre; 20,000 white corpuscles in cubic millimetre.

April 28th.—The patient was taken into the theatre and Mr. Lawson removed the tumour, which consisted of masses of enlarged glands matted together in groups. A transverse incision was first made on a level with the clavicle, and from its anterior extremity the knife was carried upwards in a line with the sterno-mastoid to behind the lobe of the ear. A flap of skin was then turned up, and after a little dissection and enucleation with the finger and handle of the scalpel, the whole of the tumour was turned out. The edges of the wound were united, and a drainage-tube was inserted into the posterior and most dependent part of the wound. The wound was then covered with a pad of lint soaked in terebine oil (one part in ten). Cotton-wool and carbolised gauze were then placed over the whole and kept *in situ* with a bandage. The right arm was bandaged across the chest. He did not sleep well, and vomited several times after the operation, probably from the effect of the anæsthetic. The wound was dressed next day with the terebine oil and covered with carbolic gauze. Temperature 99·8°; pulse 120. As he continued to vomit everything he took all food was omitted for a time, and a little ice was given to suck. A nutrient enema was administered containing half an egg, half an ounce of arrowroot, two drops of tincture of opium, and one ounce of beef-tea every three or four hours.

On the 30th he was able to keep down a little beef-tea. The tongue was moist, pulse 120, temperature 100·6°. The enemata were discontinued. From this date the boy progressed favourably, and the wound completely healed. When near convalescence the boy had an attack of erysipelas of the neck and face, which detained him in the hospital. At the end of June he was discharged, to go to Eastbourne.

Remarks by Mr. LAWSON.—This lad presented the characteristic appearance of the disease known as lymphadenoma, first described by the late Dr. Hodgkin (Med.-Chir. Trans. 1832, vol. xvii., p. 68). In the anæmic condition of the boy, and in the excessive growth of the glands in the neck, the case corresponded to that so fully described by the late Dr. Murchison in the Path. Trans., vol. xxi., p. 372. The tumour was removed because it gave pain, and as it was rapidly increasing it was likely to interfere with breathing, for it had already pushed the trachea considerably to the left side. The history of similar cases made the ultimate prognosis unfavourable. The glands in the abdomen and chest are always prone to become similarly affected, and deposits, resembling lymphatic-gland tissue, to take place in the liver, spleen, or kidneys. The operation was the means of affording great relief to the local symptoms, and of improving, for a time at least, the general health of the boy.

ASHBURTON AND BUCKFASTLEIGH COTTAGE HOSPITAL.

PLASTIC OPERATION FOR CONTRACTING CICATRIX.

(Under the care of Dr. JAMES ADAMS.)

J. S——, aged fourteen, was admitted on Oct. 30th, 1879. This boy in November, 1876, was severely burned by the ignition of gunpowder in his pocket. He was admitted into the hospital four months afterwards in a state of extreme prostration, with a bad bedsore. He had diarrhœa, and frequently passed motions involuntarily in bed. The burn included the whole right side of the abdomen from two inches left of the mesial line to the lumbar region, the anterior and inner aspect of the right thigh, the skin over right patella, and a small patch about the size of half a crown two inches above left nipple. The condition of the burn was very unhealthy. After being an inmate of the hospital sixteen months, he was discharged with the burn cicatrised; but in spite of frequent skin grafting, and the application of a heavy weight to the affected side, the cicatrix had begun to contract before his discharge.

On his readmission there was a thick and hard cicatricial band at the bend of the hip joint, causing the boy to stoop considerably, and rendering him unable to extend his thigh beyond an angle of 140° when lying on his back.

On Oct. 31st, under chloroform, the contracting band was freely divided an inch below Poupart's ligament, and a weight of 3 lb. was fixed to the leg. On extension the wound gaped three inches and a half. It was dressed with carbolised oil (1 to 30). A week later one or two small bands at the bottom of the wound that were tense, and prevented the limb lying comfortably straight, were divided.

On Nov. 8th a Lister's splint was put on the left side.

On the 22nd the wound was filled with healthy granulations, and measured four inches from the upper to the lower edge, and rather more in the transverse direction, and was lozenge-shaped. A piece of healthy skin with subcutaneous tissue was carefully dissected out at the outer side of the thigh over the trochanter, leaving a neck of skin at the point joining the wound, and a bed for the graft having then been made by removing the granulations to the depth of one-sixteenth of an inch, and of the required size (two inches by an inch), the flap was fixed in its place by five silver sutures. These were firmly and deeply embedded by means of a nævus needle. The graft took well; a small portion of the end of it sloughed, owing, I believe, to the suture there being rather tighter than it should have been.

On Dec. 8th the neck of the graft, which was firmly adherent in its new situation, was divided. At the same time the skin and subcutaneous tissue were divided about three inches above the knee, where there was some tension. The lips of the incision separated one-fourth of an inch. Once subsequently a similar incision was made, two inches higher up the thigh, followed by a similar gaping.

The transplanted skin covered only a very small portion of the large traumatic ulcer, which was healed up by the use of different stimulating lotions. At first the healing process was fairly rapid, but afterwards it was quite the reverse, and the last fourth took as long to heal as the first three-fourths.

The whole time, with but few intervals, a weight was kept fixed to the leg varying from 1 lb. to 7 lb., the medium weight of 3 lb. being chiefly used, and this he still has at night. The Liston's splint was also kept up the whole time.

The boy was discharged on July 17th, 1880, having gained at least 3 in. on his right side as the result of the operation, and he was able to lie down straight and stand upright. He was seen two months after he left the hospital, and was then able to walk well and easily, with scarcely any stoop. The operation may be regarded as highly successful, and provided, as he grows, this lowly organised portion of the burn cicatrix remains *in statu quo* and there is *further contraction*, the same line of treatment may be again resorted to.

BURRA BURRA HOSPITAL, S. AUSTRALIA.

DOUBLE EMPYEMA TREATED BY EXCISION AND ASPIRATION; RECOVERY.

(Under the care of Mr. JOHN I. SANGSTER.)

GEORGE L——, aged two years, had suffered for two weeks from an attack of broncho-pneumonia. At the end of that time the physical signs of the disease were clearing up, some slight dulness and fine moist râles being the only abnormal sounds heard at lower part of right lung posteriorly. During this period no friction sound or any symptom indicating pleurisy was discovered, but as the dyspnœa continued out of all proportion to the physical signs, and the temperature did not fall below 103°, the presence of pus in the pleural cavity was suspected, although a careful daily examination for several days failed to completely decide this point. At length the dulness appeared to have increased, and the breath sounds got less distinct, though the measurement gave a negative result. As the condition of the patient was deteriorating, it was determined to make an opening into the chest, but as a precautionary measure an exploration was made with an ordinary hypodermic syringe. Pus was obtained. The patient was then placed under the influence of chloroform, and an opening was made into the chest in the usual manner, between the eighth and ninth ribs in a line with the angle of the scapula. A considerable quantity of a mixture of serous fluid and pus escaped. A drainage-tube was introduced, and during the time that the wound was left open the pleural cavity was washed out with a small solution of carbolic acid, and, later on, iodine.

The relief obtained by the operation was not encouraging, as the dyspnœa continued almost as bad as before, the temperature fell but little, and the irritable cough continued. At the time of operation the left side was carefully examined,

but no collection could be discovered there. Five days after the operation there seemed to be fluid in the left cavity, and exploration, as before, again proved the presence of pus. The aspirator was used; two ounces were withdrawn. For two or three days there was some improvement; but the dyspnœa gradually returned, and became so severe that another aspiration was made, and six ounces of pus were obtained. After this operation the improvement in patient's condition was marked. He gradually improved; his recovery was retarded by two slight bronchial attacks; diarrhœa was also occasionally troublesome.

More than three months after the last aspiration, and six weeks after the wound on the right side was allowed to close, the child had grown, from a state of great emaciation, stout and rosy, and seemed quite easy in his breathing. The exact state of his chest could not, however, be satisfactorily ascertained, as he would not now submit to an examination. Several cases of empyæma cured by aspiration have been recorded, and it becomes a question whether this should not be first tried, and if necessary repeated, instead of resorting to the more formidable operation in the first instance.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Severe Laceration of Face.—Ataxy in several members of a family.—Sclerotomy for Eyeball Tension.—Elephantiasis of Leg treated by Elastic Bandaging.—Case of Epilepsy treated by Trephining.

THE first meeting of the session of the Clinical Society was held on Friday, Oct. 8th, Dr. Greenhow, president, in the chair. The papers read were of an unusually interesting character, and the President was fully warranted in describing it as a brilliant opening. Dr. Glover called attention to the fact that one of the papers considerably transgressed the ten-minutes rule of the Society, and urged that facts, not theories, were the special study of the Clinical Society. The President, however, replied that the rule, though a valuable one, must be applied with discretion, and that the Society must leave it to him to decide when a paper was unnecessarily prolonged; in the particular case alluded to he had felt that the paper was a very valuable one, and could not with advantage have been shortened—a view in which the members present appeared to concur.

The SECRETARY read a paper by Surgeon-Major Curran on a Case of Mutilation by a Bear. The bear had bitten his victim's face and destroyed the cheek, one eye, and a great part of both jaws. A photograph of the patient after recovery was shown.

Dr. GOWERS brought forward a series of five cases of Locomotor Ataxy in members of the same family, three of whom were exhibited. The father was healthy, but his brother and two half cousins were insane. The mother had suffered in early life from chorea. The family consisted of nine children: (1) A son, aged thirty-nine, with well-marked ataxy, which commenced at nineteen. He is just able to walk with crutches. There is incoördination in the arms and affection of articulation. Sensation to touch is normal, that to pain on the legs increased. The knee-jerk is lost. (2) A girl, who died of fever at ten years old. (3) A son, aged thirty-five, healthy. (4) A son, aged thirty-three, healthy. (5) A girl, aged twenty-nine, in whom the affection commenced at eighteen. She can now scarcely stand; there is weakness in the legs, as well as ataxy, and also incoördination in the arms. Speech is affected; sensation is normal; the knee-jerk lost. (6) A son, aged twenty-six, perfectly well. (7) A son, aged twenty-three, considerably affected. The disease showed itself at nineteen; he is now scarcely able to walk, with ataxy of both arms and legs, and loss of sensation, absence of the knee-jerk, and affection of articulation. (8) A son, aged twenty-two, reported to be well but found, on examination, to be distinctly affected. Articulation is confluent, there is inability to stand with eyes shut, absence of knee-jerk, and distinct impairment of sensation on the legs to touch. The arms are at present unaffected. (9) A son, aged nineteen, affected in rather a greater degree than the last, with slight unsteadiness of gait, inability to stand with eyes shut, distinct impairment of sensation to touch, absent knee-jerk, unsteadiness in writing, and confluent articulation. The state of sexual power is doubtful, the patients being all single. Thus of eight members of the family who have reached adult life, five are affected, a daughter and four of the seven sons. The symptoms, allowing for the variations in degree, are similar in all, the chief difference being the marked impairment of the tactile sensation in the two youngest, while in the others, in whom the affection has reached a more advanced stage, it is normal, and except that in one there is hyperalgesia. The only causal influence discoverable is the neuropathic heredity. This form of ataxy was first described as a distinct variety of ataxy by Friedreich, who recorded two groups of cases, and a few other instances have been recorded by Carré and others. Two sisters, evidently suffering from this disease, were shown in 1872 to the Medical Society of London by Dr. A. Carpenter, and in this family a brother has since become affected. Those now shown resemble Friedreich's in the early date of commencement, the affection of the arms, and the interference with speech. They differ from Friedreich's in the number of males affected and in the absence of nystagmus and in the affection of sensation in two individuals. It is noticeable that none have suffered from any pains in the limbs; there is no affection of the iris or of the optic nerve. As in Friedreich's cases, the antecedents were of other forms of nerve disturbances, not of ataxy. The term "hereditary ataxy" seems therefore of doubtful accuracy. Friedreich described the affection of speech as ataxy of articulation, but it does not differ from that seen in other degenerative diseases of the nervous system. The pathological changes were found in two of Friedreich's cases to be in the main similar to those in ordinary ataxy. — Dr. J. ALTHAUS thought that cases of ataxy were more common than usually supposed, and were often confused with paralysis. He had seen more than two hundred cases, but in none of them was more than one member of the family affected, nor could any strict heredity be traced; but in all the cases there was a neurotic tendency observed in one or both parents. Carré's cases were the most remarkable yet recorded. In one instance he states that this form of ataxy was observed in a woman, in her eight children, and in the seven children of one of the daughters—sixteen persons in all—and in three generations. It was remarkable that the pain of ordinary locomotor ataxy was quite absent in this condition, and that the affection of sensation was only slight. He thought that it would be well to follow up the history of those members of this family who were at present unaffected, and also to make careful trial of various therapeutic agents. —The PRESIDENT had never seen such cases before; and from the striking facts of the early age of the patients when first affected and the complete absence of pain, thought that the disease differed from common locomotor ataxy.—Dr. GOWERS had found that ataxy was very rarely to be traced to hereditary influence; he had stated two years ago that 50 per cent. of patients suffering from it had a history of previous syphilis, and he now thought it more accurate to say that such was the case in 75 per cent. of cases of sporadic ataxy, in all ranks of society. Apparently the disease is the same in those cases occurring in families, as the posterior columns of the spinal cord had been found to be the seat of degeneration. One of the most remarkable facts is that the disease begins at about the age of twenty, and that any members of such a family who are free at twenty-five escape altogether. So marked a feature is this that a recent applicant for life insurance, who had three brothers and sisters thus diseased, but was himself unaffected and much beyond the age of twenty-five, was recommended by him for acceptance as not being prejudiced.

Mr. SPENCER WATSON read a case of Eyeball Tension. Elizabeth M. B——, a widow and dressmaker, aged forty-six, was operated on by sclerotomy for eyeball tension in 1876, the tension being T 2. After the lapse of four years and a half the eye remains free from excess of tension, and its fellow, though occasionally visited by chromopsia, remains useful. The eye operated on has a staphyloma as the result of the sclerotomy, but this causes no inconvenience and seems beneficial as affording a means of filtration from the anterior chamber to the surface of the eye. The sight continues good up to the present date.—Mr. C. HEATH asked what advantages sclerotomy had over iridectomy. Surgeons were accustomed to see cases of

glaucoma permanently relieved by iridectomy. Some years ago oculists had fully discussed an operation introduced by Mr. Hancock of division of the ciliary muscle, and had not adopted it. By removal of a piece of the iris the secreting surface was reduced, and the tension more effectually relieved.—Mr. S. WATSON replied that sclerotomy, which is a simple section of the sclerotic with a narrow knife parallel with the surface of the iris, was a simpler and less painful operation than iridectomy, and could be done without an anæsthetic, and that as the relief of tension was less abrupt there was not the danger of intra-ocular hæmorrhage he had frequently seen occur in iridectomy. But iridectomy was still required for cases of very acute and severe glaucoma. Sclerotomy was not the same as Hancock's operation; the incision was horizontal, not vertical. He did not think the explanation of the value of iridectomy given by Mr. Heath to be correct.

Dr. STEPHEN MACKENZIE related a case of Elephantiasis of the Leg treated by Elastic Bandaging. The patient, a male, aged thirty-three, a native of Rosscar, co. Fermanagh, Ireland, had never been out of Ireland till he came to England for treatment. Worked always as a farm labourer, and was healthy until present disease. Never had syphilis; had never eaten largely of fish. His home was about nine miles from the coast. Ten years ago had an injury to leg, which was much bruised and swollen. About three years after accident the leg was noticed to be larger than its fellow, and from that time to his coming under observation the limb continued to enlarge. About four times a year, with a certain degree of regularity, the leg became acutely worse. Preceded for a few days by nausea, headache, and shivering, the leg became sore and painful, feeling extremely hot, looking red, and steaming. After lasting in this state for about a week, the surface of the leg began to discharge a fluid, clear but of offensive smell. When the fluid escaped he got ease, the heat left the leg, the nausea and constitutional disturbance subsided, and he returned to his usual condition; the limb, however, remained of greater size than before the attack. The limb, when the patient was admitted into the London Hospital in September, 1879, was enormously swollen, presenting several large lobulated masses of œdematous tissue, whilst the surface of the limb was covered by abrasions of the cuticle and papillary elevations. The right leg and scrotum were normal in all respects. There were no enlarged glands. No changes in the blood or urine. He was confined to bed simply for the first month, with slight transient subsidence of the swelling. At the end of that time Martin's bandages were firmly applied to the leg from the toes to the groin. He was kept in bed, with the exception of being allowed to go into the garden for one hour a day. The diminution in the size of the limb from the time the rubber bandages were applied was almost uninterrupted, and very remarkable. All the lobulations subsided; the papillary elevations disappeared. A good deal of fluid exuded from the cuticular abrasions, and the decrease in the limb appeared to be proportionate to the fluid discharged. As the swelling subsided what appeared to be dilated lymphatic vessels could be felt. The patient had no inconvenience from the treatment. During it he had one paroxysmal attack, lasting a few days, in which his temperature rose to 103°, and the limb became hotter than its fellow. Whilst the case probably differed in its origin from the tropical ones, and in the absence of filaria in the blood, the disease reached almost as high a grade as the elephant leg of Barbadoes or India. The case was brought forward to show the good effects of elastic bandaging. There is no novelty in bandaging a limb in this condition, for this treatment is generally adopted alone or combined with other treatment in this disease; but there were not, to the author's knowledge, any published cases in which Martin's bandages have been used for this purpose. The bandages allow of considerable equable pressure, which is kept up as the limb recedes; they are readily applied, and can be washed every day. The results in this case could scarcely have been exceeded by any other treatment, whilst that employed was wholly destitute of the dangers attendant on ligature of the femoral artery. It was found that the swelling recurred when the bandages were removed, so that it is probable that the bandages will have to be worn permanently.—The PRESIDENT asked whether the family history had been carefully inquired into with the view of tracing any possible source of hereditary taint. — Dr. CROCKER mentioned that he had recently had a similar but less severe case under his care at University College Hospital, which was the sequel of an injury. The elastic bandage was employed, and in a fortnight there was a marked improvement. Although the man was at his work all the time, the reduction in the size of the limb steadily progressed, and the man had not been to the hospital for three or four months.—Mr. A. T. NORTON reminded the Society that at its very first meeting he had recorded a similar case treated by iodide of potassium and tight bandaging. In ten months the man was cured, and when he saw him two years ago there was no return of the disease. The patient continued to wear a bandage.—Mr. GOLDING BIRD had had many examples of elephantiasis from ulcers of the leg among his out-patients that had been greatly relieved by Martin's bandages. He referred to one case in particular of old syphilitic ulceration with this form of chronic dermatitis, in which the reduction of the swelling had been very rapid, but after omitting the bandage for a month the man began to complain again, and he had been compelled to wear it constantly. He considered that the bandage did good by its pressure, and also by keeping the limb in a perpetual Turkish bath.—Mr. E. HART was glad to hear that such a formidable disease was amenable to such a simple treatment, the only really successful case he had ever seen was in Philadelphia nine months ago, in which first the sciatic and then the femoral nerve was stretched.—Dr. DOWSE mentioned a case of elephantiasis which came on five years ago from syphilis for which bandaging, mercury, and iodide of potassium had all been ineffectually tried, but was greatly benefited by the application of the constant galvanic current over the nerves of the limb. The bandages had been given up, and by this treatment alone the patient appeared to be in a fair way to get well.—The PRESIDENT said the cases of chronic dermatitis referred to by Mr. G. Bird were of an entirely different nature from true elephantiasis.—Dr. S. MACKENZIE, in reply, stated that there was no light thrown upon the case by the family history, and that this case was no doubt the result of injury. He had been informed by Mr. Barker that cases of elephantiasis were not so rare in Ireland as in England. He thought that there were all stages between simple chronic dermatitis and elephantiasis to be met with, and no sharp line of demarcation to be drawn. He did not consider nerve-stretching to be a very simple operation; in a case of hydrophobia he had known the operation afford relief to that state, but cause death from pyæmic infection from the wound.

Dr. D. B. LEES and Mr. E. BELLAMY contributed a paper on a case of Traumatic Epilepsy treated by Trephining. S. C——, when seven years old, received a blow on the head from a poker. There was no breach of surface, but the mother found a swelling over the right parietal region. When this subsided no scar or depression of bone remained. The next day he complained of headache, and this symptom persisted more or less until after the operation of trephining. About twelve months after the accident he began to have fits. These occurred at first about once a day, but afterwards more frequently. He attended for several years as an out-patient at the Hospital for Sick Children, Great Ormond-street, but without obtaining relief. On the contrary, the fits became more frequent. It was noticed that they occurred in groups, a period of very frequent fits being followed by an interval, in which he had only about one a day. The periods of exacerbation lasted about three weeks; the intervals of comparative quiet about as many months. Four (if not five) of these alterpations occurred during the fifteen months preceding the operation. When the fits were frequent, impairment of grasp in the left hand was always noticed, and he sometimes complained of pain all down the left arm. At such times also the tongue became thickly furred, and his speech (never very clear, apparently from labial paresis) became decidedly more indistinct. In April, 1879 (nearly seven years after the injury), came a period of four weeks, in which the fits were more numerous than ever before, averaging from twenty to thirty daily. In the interval between them he was apparently unconscious. When this period passed away Dr. Ferrier was requested to see the boy in consultation with special reference to the advisability of trephining. He found tenderness on pressure over the right parietal, with loss of grasp in the left hand, and the labial symptoms already mentioned. He advised that trephining should be practised, and that the part of the skull selected should correspond to a spot rather low down in the fissure of Rolando, as the centres involved seemed to be those of the arm and lip, and not of the leg.

The boy was admitted into Charing-cross Hospital under the care of Mr. Bellamy. On the day of his admission he slipped on the waxed floor of his ward and fell, falling on his left knee. He said nothing of this to anyone but his mother, but she afterwards related that he had told her he had had a bad fall. On June 14th, 1879, two days after his admission, Mr. Bellamy trephined, with antiseptic precautions. The "ligne Rolandique" had been previously marked out on the shaven scalp, according to the directions of M. Fort. The spot chosen for operation was about the centre of this line, and was a little lower down than the point indicated by the mother as the site of the original injury. The piece of bone removed was apparently quite normal. It was thought that the dura mater bulged up into the opening made by the trephine. For eight days after the operation the boy progressed very satisfactorily. The temperature gradually came down to normal, the headache vanished, and the wound healed uninterruptedly, and mainly by first intention. Twenty-four hours after the operation the fits ceased, and did not recur for eight weeks. Before the operation he had not for upwards of three years passed a fortnight free from fits. On the ninth day after the operation, however, the temperature began to rise gradually, and in four days reached 104°. There were no rigors. The boy complained of pain and tenderness in the left hip, thigh, and knee. These symptoms continued, with a temperature of 99–100°, during the month of July, and it becoming evident towards the close of the month that the head of the femur was dislocated, Mr. Bellamy excised the head of that bone on the 2nd of August. The pain, tenderness, and rise of temperature still persisted, abscesses formed low down in the thigh and invaded the knee-joint. On the 9th of October it was found necessary to amputate at the hip-joint, which was done with antiseptic precautions. The boy rapidly recovered from this operation, and gained flesh. Eight weeks after the trephining the fits recurred. In seventeen days he had twenty-six fits. If this period represented the expected crisis about three months after the last severe crisis in April, it was unquestionably much reduced in severity. Six weeks of freedom from fits followed. They then recurred, but with much less severity. During the sixteen months that have elapsed since the operation, he has passed to the authors' knowledge thirty-seven, and they believe upwards of forty, weeks entirely free from fits. Four convulsive periods have occurred, but the frequency of fits in these has never averaged more than two or three daily, and he has never been confined to bed on account of them. The authors suggested the following points as worthy of discussion:—1. The advisability of the use of trephine in traumatic epilepsy. They referred to a paper by Dr. Echeverria of New York, published in the *Archives de Médecine* for November and December, 1878, in which no less than 145 cases are cited of traumatic epilepsy treated by trephining. The results in these 145 cases were: cure, 64 per cent.; improvement, 12½ per cent.; no change, 3½ per cent.; made worse, 1 per cent.; death, 19 per cent. Dr. Echeverria maintains that the operation is by no means dangerous in itself, provided that no inflammatory symptoms are present at the time. He refers to cases of many years ago when it was performed more than twenty times on the same patient. 2. The question of the cause of the relief obtained in this case by the removal of a piece of apparently healthy bone. The successful case brought before the Medico-Chirurgical Society last winter by Mr. West of Birmingham was adduced to show that the cause must be the relief of pressure generally, and not any special effect on the motor centres, for in Mr. West's case the lesion and the seat of operation were in the frontal region. 3. The authors wished to inquire whether the periodicity which formed such a marked feature in the convulsions in this boy is usually found in cases of epilepsy due to irritation of the brain cortex. Reference was made to two cases observed at the Hospital for Sick Children, both probably due to lesion of the cortex, in which similar phenomena were observed. 4. They submitted to the surgical judgment of the Society the question of the causation of the osteomyelitis of the femur which followed the trephining. They argued from the antiseptic operation, from the rapid healing, from the boy's satisfactory progress for eight days, from the gradual rise of temperature, from the absence of rigors, and from the exclusive affection of the left hip-joint and femur, that the cause could not have been pyæmic in nature.—Dr. GOWERS suggested that the operation had merely acted like a seton, which, like other counter-irritations, was well known to be of benefit in some cases.—Dr. BROADBENT had often known epilepsy to be suspended during severe pain or illness, and thought the temporary improvement noticed might be thus explained. He had only seen one case of the kind, and Mr. Heath of Manchester had showed him a patient who had suffered from traumatic epilepsy, and had been benefited by trephining; the fits were, however, beginning to recur. — Dr. LEES, in reply, thought that Dr. Gowers and Dr. Broadbent had hardly sufficiently appreciated the marked improvement in the boy's condition that followed upon the operation.

The meeting then adjourned.

WOLVERHAMPTON DISTRICT MEDICAL SOCIETY.

THE inaugural meeting of the session 1880–81 was held on Tuesday last in the Bell Medical Library. The following officers were elected:—President: Mr. J. T. Hartill, Willenhall. Vice-president: Dr. Totherick. Secretaries: Dr. McMunn; Dr. Joseph Hunt. Committee: Mr. W. H. Hartill, Willenhall; Mr. Sharp, Walsall; Dr. Smith, Bilston; Mr. Dunn, Mr. Vincent Jackson, Mr. Lycett, Mr. Newnham. An address was delivered by Dr. Thos. Barlow, F.R.C.P., Assistant-Physician to University College Hospital and the Hospital for Sick Children, Great Ormond-street, on "The Difference between Children and Adults in their relation to Disease." After the meeting there was a supper, to which nearly all the members adjourned.

Rebiews and Notices of Books.

Lectures on Digestion; an Introduction to the Clinical Study of Diseases of the Digestive Organs. By DR. C. A. EWALD, Lecturer in the Royal University of Berlin. Translated by ROBERT SAUNDBY, M.D., Assistant Physician, General Hospital, Birmingham. London: Williams and Norgate. 1880.

"GOOD wine needs no bush:" a laudatory introduction therefore of Professor Ewald's work on Digestion, in its English garb, at our hands is quite superfluous. The German text has already made its way in this country with those familiar with the language, and Dr. Saundby's elegant and accurate translation will secure the work a still wider recognition among English and American physicians and physiologists than could have been possible otherwise. The first two lectures are devoted to a consideration of *ferments*, the questions relating to their intimate character, their significance in the combustion processes of the animal body, their ubiquity, and the possible *rôle* played by them in the production of the so-called "intra-molecular respiration" (the "dissociation process" of Pflüger) is succinctly and lucidly described. The second lecture ends with a graphic table giving the ferments met with in the animal body and the products resulting from their action; this table we prophesy ere long will become part of the stock in trade of most manuals of physiology. Lectures three and four are devoted to the salivary glands, their histology, innervation, and secreting processes. Heidenhain's experiments, with reference to the effect of the secretion of parotid saliva by stimulation of Jacobson's nerve and the sympathetic, are fully discussed. Professor Ewald thinks as a result of these inquiries we must regard the nerve of Jacobson as governing mainly the separation of water, while the sympathetic presides over the formation of the specific elements of the secretions. Professor Ewald dismisses our old friend "the much-talked-of sulphocyanide of potassium" very contemptuously, regarding it only as a product of decomposition, arising in the cavity of the mouth, probably derived from urea and sulphate of potash. Three lectures are devoted to gastric digestion. Discussing the question what are the causes that bring about the secretion of acid, especially of a

mineral acid, in gastric juice from alkaline blood, Professor Ewald remarks that a recent "brilliant experiment" of Maly's has thrown an "unexpected light" on this subject. Both Ewald and Maly, however, seem ignorant of the fact that the separation of acid from an alkaline solution consisting of a neutral and acid salt, both having an alkaline reaction, had been effected experimentally by Ralfe in the laboratory of Charing-cross Hospital, and the particulars of which appeared in THE LANCET, July 4th, 1874, quite three years before Maly's experiment! Discussing the physiology of the bile, Ewald incidentally directs attention to Rossenbach's method of testing for bile pigment; it is so simple that it deserves to be universally practised. Icteric urine is filtered and the wet filter paper dabbed with a drop of impure nitric acid, at the border of the paper the play of colours from red to green is developed. On the contrary, with regard to the test for bile acids, we do not think the "Strassbourg method," recommended by Professor Ewald, superior to that devised by Francis with "sulphosaccharic acid." The pancreas, as might naturally be expected, comes in for a considerable share of the author's attention, but space forbids our doing more than drawing attention to the excellent summary given of all that is known concerning that organ and its secretion. One point, however, we must mention, which has a practical bearing upon treatment of disease, and that is Ewald's statement that the power of digesting albumen in the pancreatic ferment is destroyed by the action of gastric digestion, so that for therapeutic purposes, so far as concerns administration by the mouth, pancreatic preparations are quite worthless, a view confirmed by Dr. Roberts in the Lumleian Lectures for the present year.

OUR LIBRARY TABLE.

On Removal of the Entire Tongue by the Walter-Whitehead Method; with full details of the operation and after-treatment. By EDWARD LUND, F.R.C.S., one of the Surgeons to the Manchester Royal Infirmary, Professor of Surgery in the Owens College. London: J. & A. Churchill.—Mr. Lund's object in this paper, which was originally written for the Medical Society of Owens College, is to advocate the plan of excising the whole tongue, which has been systematised, and, in his view, perfected, by Mr. W. Whitehead. The main principles of the operation are the removal of the whole tongue through the mouth by means of scissors only, and the ligature, with silk thread, of the lingual arteries and any branches that may bleed to any troublesome extent. We judge from Mr. Lund's description that the operation is really formidable, that the hæmorrhage may be profuse and dangerous in more than one way, and that only a bold operator with skilled and trusty assistants should ever undertake it. As by other means, and especially by the use of the wire or thread écraseur, the operation may be robbed of most of its primary and subsequent terrors, we do not think that many surgeons will be found willing to adopt this, a more difficult and dangerous, method.

L'Année Médicale de l'Hospice de la Princesse D. Maria-Amelia à Funchal (Ile Madeira.) Par C. A. MOURRAO-PITTA, M.D., &c. 1871-1879. pp. 23 and 31.—These pamphlets contain a brief report of the work of the hospital to which M. Mourrao-Pitta is attached, during the years 1871-1879. The hospital is devoted to the reception of patients suffering from chest affections. The tables place the patients under the several heads of tuberculosis of the first, second, and third degrees; chronic bronchitis; chronic pleuro-pneumonia; chronic pleurisy; pulmonary gangrene, and chronic asthmatic bronchitis. One hundred and ninety-one cases were under treatment; their occupations, age, and married or single state are given in different tables. There were sixty-six deaths. The object of the reports seems to be to point out that the climate of Madeira is still charming, notwithstanding the disparaging remarks in regard to it that from time to time appear in the journals. We must leave to those who have made trial of Madeira as a winter residence the corroboration or refutation of M. Mourrao-Pitta's statements.

Notes on Diseases of Women. By J. J. REYNOLDS. J. and A. Churchill.—This little book contains eighty-six pages, and is said to be "specially designed for students preparing for examination." In the short space stated it treats of diseases of the uterus, vagina, and vulva. It can, however, be regarded as little else than an index to larger works upon the subject. It cannot teach diseases of women, though it may be an aid to the memory of those acquainted with the subject. We can see no reason for the publication of such a work. On the other hand, there are many reasons against it, for such books aid cramming (which frustrates the object of examinations), and encourage ignorance of such subjects as they treat.

Science. Vol. i., No. 2. Sept. 11th, 1880.—The current number of this young and well-conducted journal contains a very long and interesting article upon the photophone, by Mr. Alexander Graham Bell. The principle of this instrument is, that a beam of light is reflected upon a mirror diaphragm, which is set in motion by the voice or other means. The concentrated ray is then reflected so as to affect a piece of selenium in a telephonic current, which by its varying conductivity acts intermittingly on the diaphragm of the telephone, and thus in the usual way reproduces the sound. The paper is illustrated by many drawings, and is well worthy of perusal.

The *Leisure Hour*, the *Sunday at Home*, the *Girls' Own Paper* (Religious Tract Society) are serials which deserve the success they seem to have achieved. They supply a literature useful of its kind and wholesome in its tendency, and which compares favourably with much that is issued avowedly for the benefit of the religious public and our juvenile population. The October part of the last-named publication contains an article, with illustrations, on a subject to which we have repeatedly called attention—namely, the urgent need for the provision of seats for shop-women. The device suggested in the article referred to, though no doubt ingenious, appears to require to be submitted to the test of further experience before it could be confidently recommended for universal adoption.

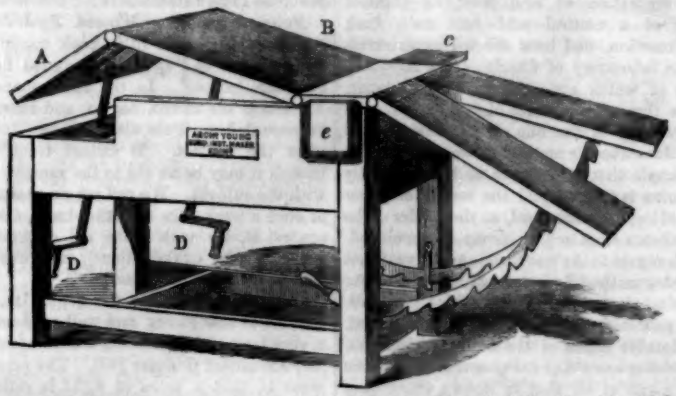
We have also received the following:—*Professional Book-keeping.* By W. J. Gordon (Wyman and Sons). *Illustrated Guide to Blackpool.* A new edition of the *Familiar History of Birds.* By the late Dr. E. Stanley (Longmans). Dickens's *Dictionary of London. Picturesque Tourist of Scotland* (A. & C. Black). *The Englishman's Illustrated Guide-book to the United States and Canada* (Longmans). The Fourth Edition of the *Nature and Treatment of Syphilis.* By Dr. C. R. Drysdale (Baillière, Tindall, and Cox). *Introductory History of England.* By W. M. Lupton (Longmans). *Journals and Journalism.* By John Oldcastle (Field and Tuer); &c. &c.

New Inventions.

A NEW OPERATING-TABLE.

WHEN making our inspection of the new Edinburgh Royal Infirmary, we were much struck by Professor Annandale's new operating-table, and we have pleasure in laying before our readers a representation and description of the same. This table has been constructed at Professor Annandale's suggestion, with a view to combine several arrangements already in use in other hospitals. By means of two screws D D, the portions A B, the body of the table, can be steadily elevated or depressed, together or separately,

while the patient is on the table. The portion A was specially designed in order to allow the head to be placed in the dependent position during operations on the mouth, throat, ace, &c. (see Professor Annandale's paper in THE LANCET of March 8th, 1879); and the two small trays, *c c*, which can be folded down, are found to be very useful for placing, convenient to the operator's hands, a small basin containing carbolic solution, for dipping instruments into and carrying



out other Listerian precautions. Castors covered with vulcanised india-rubber have been added to the legs since the drawing was taken, which render it easy of movement. The table has been made by Archibald Young, surgical instrument maker to the Royal Infirmary, 57, Forrest-road, and 58, North-bridge, Edinburgh.

IMPROVED REGULATING DIGITORUM.

A MODIFICATION of the dumb piano has been contrived by Messrs. Horn, of Elgin-road, Croydon, which is designed to strengthen the movements of the fingers by rhythmical exercise. It consists of a series of five or more piano-keys, the resistance of which can be nicely regulated from an ounce to a pound, or more if required, and the degree of resistance is shown by an index at the side. Another improvement consists in a means of regulating the touch of the keys from one-eighth to seven-eighths of an inch, as required for the purpose of exercising the muscles more fully. Messrs. Horn, in the wording of their prospectus, seem to suggest rather more power for the instrument, as a means of restoring strength, than it can justly claim; but as a contrivance for facilitating muscular exercise of the fingers it is certainly a useful mechanism, and as such has been found of practical value.

THE LADIES' SANITARY TOWEL.

THIS consists of soft wool, which has been treated with a disinfecting substance. It appears to be well adapted for the purpose which it is intended to fulfil, but while the price charged for it remains at three shillings a dozen, we cannot expect it to come into common use. This is a misfortune, for this towel has advantages, not the least of which is that it must be destroyed immediately after use. The towels are manufactured by Messrs. Southall Brothers and Barclay, Birmingham.

THE IMMEDIATE TREATMENT OF STRICTURE OF THE URETHRA.

To the Editor of THE LANCET.

SIR,—In your issue of the 2nd inst. appears a letter from Mr. Horace Manders, in which he alludes to my letter to you on the subject of the treatment of stricture by the "immediate plan." Mr. Manders seems entirely to misapprehend the object with which my letter was written; it was not written with the view of contrasting one plan of operative procedure with another, but was written solely with the view of vindicating Mr. Holt's operation, so far as my experience, by no means a limited one, goes, from the vague, serious, and unsupported charges so unhesitatingly brought against it. Were it my object to contrast different modes of operative procedure, I might refer to two fatal cases (the patients being dear personal friends of my own) resulting on external urethrotomy, the operation having been performed in one case by the late Mr. Hutton of this city, a surgeon second to none, and in the other by no less a person than the late Professor Syme. I could also refer to at least one fatal case resulting on internal urethrotomy, the instrument employed having been Maisonneuve's, and the operator being one of our most skilful hospital surgeons.

I am, Sir, yours, &c.,

RAWDON MACNAMARA,
Surgeon to the Meath Hospital, and Senior Surgeon to the Westmoreland Lock Hospital.

Stephen's-green, Oct. 9th, 1880.

To the Editor of THE LANCET.

SIR,—I observe in THE LANCET of the 2nd inst. a reference by Mr. Teevan to a case of mine in which death followed the above operation. Mr. Teevan assumes that because the patient had dropsy he suffered from renal disease. On referring to my notes, I find that such was not the case. He had ascites from diseased liver, and as a complication a very tight stricture. The introduction of a catheter was extremely difficult and accompanied by great pain, and I thought it better to split than subject him to continual irritation. I am bound to say that I do not attribute the death to the operation; on the contrary, I believe he thereby obtained much relief.

I have several times performed Holt's operation, and my experience, so far as danger to life is concerned, is decidedly favourable. I feel it the more necessary to state this distinctly, as, for other reasons which I need not here go into, I have abandoned the operation in favour of internal urethrotomy. (Vide THE LANCET, vol. i., 1878, p. 200.)

I am, Sir, yours truly,

Liverpool, Oct. 6th, 1880. C. E. LYSTER.

GLASGOW SOUTHERN MEDICAL SOCIETY.—At the thirty-seventh annual meeting of the Glasgow Southern Medical Society, held on October 7th, the following office-bearers for the session 1880-81 were appointed:—President: T. F. Gilmour, L.R.C.P. Ed. Vice-President: Neil Carmichael, M.D., F.F.P.S.G. Treasurer: E. McMillan, L.R.C.S. Ed. Secretary: William Carr, M.B., L.R.C.S. Ed. Editorial Secretary: William McFarlane, M.D. Seal-Keeper: Alex. Napier, M.D. Court Medical: John Niven, L.F.P.S.G., Convener; A. L. Kelly, M.D.; Eben. Duncan, M.D.; Jas. Stirton, M.D.; Robt. Park, L.F.P.S.G. The following gentlemen, with the office-bearers, form the council: A. J. Hall, M.D.; Archd. Pearson, M.D.; Wm. Wilson, L.R.C.S. Ed. William Carr, M.B., Secretary.

THE LANCET.

LONDON: SATURDAY, OCTOBER 16, 1880.

BOTH the aspect and the actual position of affairs at Guy's Hospital have changed since last we discussed the situation, its duties, and its probabilities. Just as we were going to press on the 7th inst., the Governors held a Special General Court, and passed resolutions condemning the action of the medical staff, and calling upon Dr. HABERSHON and Mr. COOPER FORSTER to resign. The terms in which the Governors embodied their conclusions and determination are so remarkable that we reproduce them. "Resolved—(1) That it is essential to the well-being of the hospital that the medical staff and nursing department should work in harmony. (2) That the medical staff having persisted in ignoring the matron appointed by the Court, and confirmed in her appointment after patient investigation of all complaints against her, while she is on her part willing to submit herself obediently to the orders of the several physicians and surgeons in all matters directly affecting the treatment of any patient, this Court finds that it is the attitude of the medical staff which impedes the harmonious working of the hospital. (3) That Dr. HABERSHON and Mr. COOPER FORSTER having made themselves responsible for a circular in which they refuse the means offered them by the Court for bringing all complaints before it, and impute to the Governors that they knowingly persist in a mischievous system, are hereby required to resign the posts which they hold in the hospital.—HENRY H. GIBBS, President of Guy's Hospital." Let us see what all this means.

The first resolution has the literary merit of going straight to the root of the matter, and making the issue perfectly clear. The Governors regard the medical staff as one element of the hospital system, and the "nursing department" as another, and they require that the *two* "should work in harmony." Here lies the germ of the whole contention, and whatever may be done to gloss over the surface of matters, there can be no final settlement of the real issue raised until it is recognised that "the medical staff" and "the nursing department" of a hospital are *not* two departments which "should work in harmony," but that the "nursing department" of a hospital stands in precisely the same relation to the medical staff as the dressing, the pharmaceutical, or the surgical-instrument "departments." In short, it must be seen and felt by all concerned that, inasmuch as a hospital is *throughout* an establishment for medical treatment it—that is, the institution as a whole—must be organised, not in "harmony" with, but in subserviency to, the medical authority. Nursing is not, and never can be, a separate branch of skill or a specialty. It is an integral part of treatment; and medical committees which for the sake of peace are tacitly allowing the "nursing departments" at other hospitals to be regarded as distinct, and striving, from amiable but short-sighted motives, to work in "harmony" with them, are practically surrendering a principle, and preparing the way for a catastrophe which in the interests of the sick poor, not less than of science, ought to be averted.

The second resolution is one chiefly affecting the details of the local controversy at Guy's, and does not call for general discussion. Whether or not the matron of that institution is "willing to submit herself obediently to the orders of the physicians and surgeons in all matters directly affecting the treatment of any patient," is scarcely a question with which the profession has any concern. It is not of the *personnel* of this particular establishment we desire to speak, but of the system at work there, and the organisation as a whole. The matron may be docile, but the position she occupies as the head of a separate "department" is untenable. The medical interests of the poor and of the institution cannot be satisfied by any concession on *her* part. Unless the service is so changed that the medical men shall have direct control of the nursing to which *their* patients are subjected, and by which, in a large measure, diseases are "treated," it is impossible to regard the position of affairs with confidence or even complacency. The nurse is the agent of the physician or surgeon in charge of a case. She is as much his instrument, and the interests of cure require that she should be as completely under his control, as the drug prescribed by the physician, or the knife in the hand of the surgeon. If he directs that a patient shall be kept in the recumbent posture, no matron must be empowered to give any contradictory order, and no rule can be allowed to stand in the way of the special directions of the physician being carried out. So, likewise, nurses must not be removed from ward to ward, either at the caprice of the matron or in obedience to any rule of rotation, so that the services of a nurse trained by a particular physician or surgeon, and familiar with *his* system of nursing, whatever that may be, shall be lost to the medical officer and his patient. These are fruits of the "nursing department," and it must be uprooted. The attempt to work in harmony with it is vain, because the system is, in itself, *mischievous*.

The third resolution embodies the judgment of the Court of Governors upon the letter of Dr. HABERSHON and Mr. COOPER FORSTER, and the penal sentence which, in its wisdom, that Court saw fit to pronounce. The following is the text of the letter which has given such dire offence.

To the President, Treasurer, and Governors of Guy's Hospital.

MY LORDS AND GENTLEMEN,—We have carefully considered the Report of the Governors' Committee, and the proposals which you have made to us in accordance with its recommendations. We beg to thank you for the further explanations which we have received from the Treasurer through Dr. Habershon, and to express our appreciation of the trouble taken by the Committee. We regret, however, that we are obliged to decline the proposition which you have made. We entirely disapprove of the system of nursing which the Treasurer introduced last November, without consultation with us, without our sanction, and even without our knowledge. We told the Treasurer in December, and the Court of Governors in February last, that the new Matron was unfitted for her post, and we asked for her removal. We then warned you of the evils which would ensue if our representations were disregarded. We need not say how lamentably these fears have been realised. Our patients have suffered, the discipline of our School has been impaired, the good order and harmony which ought to

exist has been gravely disturbed, and the authority of the Treasurer has been thrown away. Worst of all, the cherished reputation of Guy's Hospital is in jeopardy. We should be most happy to aid the Taking-in Committee with our counsel, but so long as the present Matron is maintained in office, and so long as the Treasurer continues the course of action which has led to our present disasters, we have no hope of real improvement, and we cannot consent to take part in a system which we and you alike know, by the unhappy experience of the last few months, to be in every respect mischievous.

We cannot but hope, in justice to the Governors, that they will even now take the obvious and necessary steps to restore the prosperity and harmony of last October. If our unanimous and repeated protests are disregarded, we must publicly record the facts which abundantly justify our action, and leave the responsibility of present and future evils upon the Treasurer and Governors. We shall continue to perform our duties to the utmost of our power; we shall still do our best to obviate the consequences of ill-advised action; and we shall wait with confidence for better counsels to prevail.

We are, my Lords and Gentlemen,

Your obedient servants,

(Signed on behalf of the Medical Staff.)

S. O. HABERSHON,
Sen. Phys. Guy's Hosp.
J. COOPER FORSTER,
Sen. Surg. Guy's Hosp.

Guy's Hospital, Aug. 13th, 1880.

The medical faculty have, it appears, withdrawn this letter. At a full meeting of the medical and surgical staff, held on Saturday, Oct. 9th, it was unanimously resolved:—"1. To request the Governors' permission to withdraw the communication dated August 13th, 1880, and to express regret that a sentence contained in it should be open to the construction which has been put upon it; and further, to offer their assurance that it was not intended by the staff to impute that 'they (the Governors) knowingly persist in a mischievous system.' 2. That having heard through Dr. HABERSHON that representatives from the staff are to form an integral part of the Sub-committee of Governors, the staff are prepared to send representatives accordingly. 3. That as Dr. HABERSHON and Mr. COOPER FORSTER signed the communication of August 13th on behalf of the staff, this meeting feels the staff is collectively responsible for it." There is, happily for the honour and dignity of the medical staff, no foundation whatever for the statement in a newspaper report that the medical staff expressed a hope that, "under the circumstances," the Governors would rescind their resolution calling upon the senior physician and surgeon to resign. Disunion would have been a fatal evil; but here again we have the satisfaction of knowing that the several members of the staff have pledged themselves to stand together and to be bound by the action of their seniors in their name and on their behalf. They, in fact, placed their resignations in the hands of Dr. HABERSHON and Mr. COOPER FORSTER, to be used in the event of those gentlemen being compelled to retire. It would, indeed, have been a deplorable *finale* to what promised to be a manly assertion of the true claims made by the medical profession in the interests of the sick poor, if those to whom we all look with respect and confidence as standing boldly in the breach, had surrendered, or even faltered in their steadfastness at the moment of victory. The cause in which they are engaged is not their own, nor are their personal interests to be regarded as paramount. Humanity imposes upon them the duty of speaking and acting in the behalf of hospital physicians and surgeons throughout the country. It is comprehensible that the staff may prefer to withdraw a phrase which, as they allege, has been misinterpreted, but we must confess our inability to understand why the letter as a whole has been withdrawn. It was, as our readers will see, a manly, straightforward, and good letter, embodying the conclusions at which everybody who knows anything of this lamentable business must have arrived independently. The Governors, in their statement, did not quote correctly the sentence to which they took exception. They charged Dr. HABERSHON and Mr. COOPER FORSTER with having imputed to them that they persisted in maintaining a system which they, the Governors, knew to be in every way mischievous, whereas what Dr. HABERSHON and Mr. COOPER FORSTER actually wrote was: "We cannot consent to take part in a system which we and you alike know, by the unhappy experience of the last few months, to be in every respect mischievous." If there is any sting in this sentence, its virulence must be entirely due to its veracity. Why it should have been withdrawn we cannot even guess. If the truth may not be spoken in any letter addressed by the medical staff to the governors of a hospital, the relation of these two authorities needs to be entirely revised.

As the matter now stands, we assume that an attempt will be made to carry on the business of the hospital by means of what purports to be a joint administrative committee. Such a committee, as Mr. LUCAS has opportunely pointed out, ought, in accordance with the express wishes of the founder of Guy's, to be constituted, in part at least, of medical men. THOMAS GUY, by his will, nominated four physicians—namely, Drs. RICHARD MEADE, THOMAS CROW, FRANCIS FOUQUIER, and EDWARD HULSE, as a Committee of Management. By the process of self-election—a destructive arrangement at the best—the medical element has been entirely excluded from the Committee of Management! This is a matter which ought certainly to be brought under the notice of Parliament. In spirit it contravenes the terms of the founder's will, and transgresses the fundamental principle which is supposed to underlie the policy of the Charity Commissioners. An essentially *medical* institution cannot successfully or consistently be administered without the presence of a *medical* element on the Committee of Management. It *may* be expedient to give the arrangement by which a medical element is to be introduced into a "Taking-in Committee,"—a half-hearted and round-about way of making a concession—the trial asked for; but we are doubtful of success. It ought at least to be a condition of the agreement that the Governors shall acknowledge their error in trying to rule the hospital without the medical staff, and to treat the physicians and surgeons as their servants instead of the principal authorities in the charity. We cannot claim a lower status than this for the profession in relation to institutions established *solely* for a curative purpose, whether they be hospitals for the sick or asylums for the insane. And, we are convinced, no lower status can be assumed by any medical staff without a sacrifice of usefulness and self-respect.

A RECENT outbreak of nervous disturbance in Italy, which has been described in the *Annales d'Hygiène* by M. LÉON

COLIN, indicates that the conditions which gave rise to some of the most remarkable epidemic phenomena of the Middle Ages are not yet extinct in the country in which they were then chiefly prevalent. On Dec. 11th, 1878, the governor of the district of Tolmezzo informed the Prefect of Undine that for three months some forty females, living in the commune of Verzegnis, had been attacked by religious mania. In consequence, Drs. FRANZOLINI and CHIAP were delegated to examine the outbreak. From their report it appears that the first case was in the person of a woman named MARGUERITE VIDUSSON, who had been the subject of simple hysteria for about eight years. In January, 1878, she began to suffer from convulsive attacks, accompanied by cries and lamentations. She was regarded as the subject of demoniacal possession, and on the first Sunday in May was publicly exorcised. Her affection, however, increased in severity; the attacks were more frequent and more intense, and were especially provoked by the sound of church bells, and by the sight of priests. Seven months later, three other hysterical girls became subject to "convulsive and clamorous" attacks. Here, again, an attempt was made to get rid of the supposed demon. A solemn mass was said in the presence of the sufferers, but was followed only by a fresh outbreak. At the time of the visit of the delegates eighteen were suffering, aged from sixteen to twenty-six years, except three, whose ages were respectively forty-five, fifty-five, and sixty-three years. Similar symptoms had also appeared in a young soldier on leave in the village.

During the attacks the patients talked of the demon which possessed them, stated the date on which they were seized by it, and the names of the persons who were possessed before them. Some boasted of being prophetesses and clairvoyants, and of having the gift of tongues. In proof of the latter they pronounced incomprehensible sentences which they affirmed to be Latin or French. In all the sound of church bells caused attacks, and religious ceremonies appeared not only to aggravate the disease in the sufferers, but also to cause its extension to those not previously attacked. The reporters referred the outbreak to pre-existing hysteria, aggravated by the fanatical zeal of certain preachers, and to the frequency and exceptional impressiveness of the religious services which were being held as a means of cure. Their effect was to recall to the memory of the hysterical women the legends of demoniacal possession and of sorcery, and the exorcism of the priests deepened their conviction as to the nature of the affliction. Dr. FRANZOLINI draws special attention to certain old establishments long of repute for the efficacy of the exorcisms practised at them. He cites especially the sanctuary of Clanzetto, an odious vestige, as he terms it, of the barbarism of the Middle Ages.

M. COLIN points out that the soil was particularly favourable for the development of an epidemic of this nature. The population of Verzegnis is backward in education, and most superstitious, and functional nervous diseases are common among them. Dr. FRANZOLINI has, however, ascertained that they possess a practical immunity from alcoholism and from pellagra, and also from diseases due to general insanitary conditions. He appears to be inclined to ascribe some share in the production of the disease to an obscure pathological influence derived from the French race, since he notes that the inhabitants pronounce the letter "r" as it is pronounced in France, and not as in Italy—the suggested inference from this circumstance M. LÉON COLIN is naturally unable to discern. It appears, further, that the inhabitants of the village are a good deal cut off from intercourse with the adjacent country in consequence of comparative inaccessibility, and the frequent interruption of communications by storms and floods. Moreover, craniometric observations on twelve of the inhabitants seem to show that the brachycephalic form of skull predominates, and that the development of the cranium is slightly below the average.

M. COLIN points out, with much truth, that the relative sequestration of the inhabitants of a town must tend to favour the spread of such a nervous malady, if it does not assist in its production. The reciprocal impressions of the inhabitants are little varied, and hence, in spite of differences in age and social position, the members of the community come to bear a close mutual resemblance in psychological constitution. Consanguineous marriages will be common in such a population, and will contribute to the deterioration of the masses, and to the development of any common morbid predisposition. If such a predisposition results, in one individual, in actual disease, many others are probably not far from the same morbid state, ready to undergo fuller development by imitative contagion.

The epidemic at Verzegnis has proved extremely obstinate. Since the commissioners visited the place, new cases have occurred, which have rendered energetic measures necessary—even a military occupation of the district (!)—while seventeen of the "possessed" have been compulsorily removed to the hospital at Undine. Such an epidemic constitutes a rare event in modern Europe, but it reminds us closely of some historical epidemics with which all are familiar. Even in our own day, in some backward races, as of Norway and New Caledonia, similar outbreaks have been observed.

THE Introductory Addresses in the provinces bear a very favourable comparison with those of the metropolis, and only confirm that consensus of advice and opinion on which we remarked as a feature of the London Introductories. There is no royal road to medical knowledge or success. The provincial teachers agree with the London ones that only on the basis of a good general education can a solid medical education be founded; and that the most vital subjects of study in real medical education are Anatomy and Physiology. On the whole, there seems a tendency in the mind of teachers to attach more importance to Physiology, and perhaps less to very minute and detailed Anatomy. Surgical, regional, prominent, and medical Anatomy, all are agreed, should be severely and soundly learnt. That Pathology cannot be understood apart from Physiology is one powerful reason for attention to this subject; but there is another, in the fact alluded to by Dr. WATERS, of the Liverpool School of Medicine, that it is daily more and more taught in schools, and will, in its great facts, become part of the common knowledge of educated people; and in these days of school boards who is to remain uneducated? We note Dr. WATERS's words on Anatomy, and on the provision for its teaching in Liverpool, with great satis-

faction. "It [Anatomy] lies at the root of all your studies, and you will find in this school the completest means and opportunities for acquiring a practical knowledge of it..... You will find the study of it not only essential in order to pass examinations, not only in reference to the study of disease and accidents, but also of the highest value as a training for the mind." Students of the first and second year especially, who are still in the happy position of having no experience of unsuccessful examinations, might do worse than make a large-sized copy of these words, and place them over their mantelshelf, and students who have had such experience will find the best security against a repetition of it in a similar device.

Dr. GWYNNE, of Sheffield, in a very able address, drew attention to the special advantages of the Sheffield School. He was severe in his reflections on Oxford, hoped much from the lately-created Victoria University of Manchester, and, while admitting the good done by the University of London, maintained in manly language that "it failed in the most valuable duty of a university—viz., *teaching*." He specially recommended the study of physiology, and the institution of a preliminary scientific examination, so as to lighten the overcrowded curriculum. At Leeds, too, Mr. CHARLES J. WRIGHT advocated, like Dr. ORD, making the natural sciences part of the school schedule. Mr. WRIGHT also touched on the question of pupilage to a general practitioner. Though there is some difference of opinion as to where this should come in the career of a student; there is a growing tendency to believe, what is only too obvious, that some great lessons of practice can only be learnt properly in the school of practice itself. Mr. WRIGHT would place this pupilage in the period just succeeding the Primary Examination in Anatomy and Physiology. Like Dr. GWYNNE, he spoke in favourable terms of the Victoria University, and expressed a hope that a union might ere long be effected between the College and their own School of Medicine. Professor BARTLEET, at Birmingham, though indulging in a somewhat gloomy style as to the political and social disadvantages of the position of the medical practitioner, became more cheerful at the close, and said that the general practitioner was the backbone of the profession, the man to cope with difficulties of every kind in every department of general and special practice, and honoured in his district as those in special practice rarely were.

Annotations.

"Ne quid nimis."

THE NURSING QUESTION AT THE WESTMINSTER HOSPITAL.

FOR the past few years the Westminster Hospital has been nursed by the Westminster Training School for Nurses, an institution founded by the late Lady Augusta Stanley in 1874. Owing to certain disagreements between the hospital authorities and the committee of the home and their servants, it has been found necessary to cancel the standing agreement, and substitute for it another. We have this new agreement before us, and call attention to it because it is most important to watch vigilantly the various developments of the "nursing department." The main provisions of this agreement are as follows:—The nurses are to be under the charge and authority of a "lady superintendent," to be selected by the home, and appointed by the hospital. This person is to be paid by the home, but is to reside in the hospital, and in addition is to discharge the duties of matron of the hospital without salary. The committees of the home and of the hospital are annually to appoint three of their number who shall form a "nursing joint committee," and "all complaints with respect to matters in the hospital under the control of the lady superintendent, whether as lady superintendent or matron, shall in the first instance be made to her, and if the complainant be not satisfied, the complaint may be made to the house committee, or to the committee of the home, to be by them referred without discussion to the nursing joint committee, whose decision shall be final." Should any questions arise which are not thus provided for, they are to be settled by three referees, one to be nominated by each of the two committees, and the third by the two thus chosen. "The lady superintendent shall not be removable except by common consent of the hospital and the home, and in the event of any difference arising on this subject the matter shall be referred to the referees." The permanent staff of nurses is to be not less than twenty-six in number, and the home may send to the hospital for training probationers not exceeding twenty-five at any one time. The other clauses in the agreement refer to the financial arrangements. Viewing the matter from an outside, and impartial, standpoint, we think this agreement contains within itself endless opportunities for disagreement. The only possible chance of its working well is that a wise woman should be appointed lady superintendent, and that there should never be any occasion to refer to the agreement. Leaving out of sight minor points, there are several of the provisions to which most serious objection must be taken. First of all, there is the introduction of an outside authority not in any way officially connected with the hospital; for although the lady superintendent is to perform the duties of her office "subject to the general control of the house committee of the hospital," that committee cannot select her, cannot dismiss her, does not pay her, and may not consider any complaint brought against her from any source whatsoever. Its "general control" over her is therefore a mere figure of speech, a delusion, and, we fear, a snare. But this is not the worst of the matter, for the duties of matron are to be discharged by this lady superintendent, over whom the hospital authorities have no direct control; and yet these duties have nothing whatever to do with the nursing of the hospital; the hospital authorities have actually delegated their duty of choosing their own matron, and if perchance she and the cook or any of the servants disagree, the matter has to be referred to a "nursing joint committee." How is it possible that any decisions of an outside authority can be final on questions relating purely and solely to servants of the hospital? The next fundamental blot in this agreement is the total ignoring of the claim of medical officers of hospitals to control the nursing of the patients for whose welfare they are responsible. The staff are specially precluded from the appointment of referees, and the only point on which they are to be consulted is the dismissal or removal of ward sisters; but unless they agree with the lady superintendent, the matter is to be referred to the "nursing joint committee," so that their authority here is nominal rather than real. It is not difficult to trace the real purport of the agreement; the one object attained by it, whatever may have been in view, is the conversion of the hospital into a training school for nurses in connexion with the home. As many as twenty-five women may be sent to the hospital regularly for the purposes of training only, while only one more than that number of trained nurses has to be provided

s the permanent establishment; and at the same time the home is to be paid more highly than formerly for its services. Against this we fail to find one single advantage to accrue to the hospital. None are so interested in improved nursing as doctors, but the fundamental principle of all good nursing is that, like the other treatment, medicinal and dietetic, it shall be directed and controlled by the medical men in charge of the case.

QUEEN'S UNIVERSITY IN IRELAND.

THE annual meeting of Convocation of the Queen's University in Ireland was held on the 7th inst., presided over by Sir Robert Kane, Vice-Chancellor. The report of the annual committee for 1879-80, which was adopted, expressed an opinion that the University Education (Ireland) Act of 1879 was unfair to the Queen's University and its graduates and undergraduates, now numbering nearly 3000. The committee trusted that Her Majesty's Government would reconsider the matter, and make such changes in the educational arrangements of Ireland as would leave to the Queen's University a continued separate existence. The Senate having nominated Sir Robert Kane, F.R.S., as Vice-Chancellor in the room of the late Sir Dominic Corrigan, the place which he held on the Committee as an ordinary member was vacated, and Dr. O'Keefe, of Cork, was unanimously elected to the vacancy. A resolution in reference to the dissolution of the University and urging that an appeal should be made to the Government to reconsider its position, as alluded to in our issue of last week, was unanimously adopted; it being a further instruction that the Committee of Convocation should seek the co-operation of the Graduates' Association at the Queen's Colleges and in London, in appointing a deputation. Mr. R. J. M'Mordie then moved a series of resolutions, to the effect that without reference to the demands for endowed sectarian universities or colleges, Dublin University should occupy in relation to any new university the same position as the Queen's University; that the existing non-sectarian colleges—viz., Trinity College, Dublin, and the Queen's Colleges—should be affiliated colleges in a non-sectarian teaching university; that by additional endowments, or an adjustment of existing endowments, they should have similar advantages as regards professorships, residences, fellowships, and exhibitions; and that a deputation be appointed to submit the views of Convocation to the Prime Minister and the Chief Secretary for Ireland. These resolutions, however, after a little discursive argumentation, were withdrawn, and the proceedings terminated. We may add, that there is little doubt that the legislation of the late Government in reference to university education in Ireland has not been successful. It has not satisfied anyone; it has disappointed the friends of the Queen's University, and it has only partially pleased its enemies. It is, indeed, notorious that some of the most influential members of the Senate of the new University have joined in open condemnation of the Queen's Colleges; although an assurance was publicly given by the late Government that they would not be injured.

UNCERTIFIED CAUSES OF DEATH IN LONDON.

THE present unsatisfactory state of registration law notwithstanding, a good deal of unfounded indignation was recently expressed at a special meeting of the Sanitary Committee of the St. Pancras Vestry, with reference to the statement of the Medical Officer of Health, that the registrars of births and deaths in London are in the habit of registering deaths in a wholesale manner without a medical certificate. We have continually insisted that the State, which compulsorily imposes upon all registered medical practitioners the duty of furnishing gratuitous certificates of the causes of the deaths of their patients, is bound to provide some means for obtaining satisfactory and scientific evidence of the causes of other deaths—namely, cases in which no registered practitioner has been in attendance on the deceased, and in which no inquest is held; and we further maintain that effectual means might be adopted for securing this end, which, instead of increasing the number of inquests, would render unnecessary a large proportion of those now held. Such a reform, however, which is intimately bound up with the impending reform of the laws governing the appointment and duties of coroners, will rather be retarded than assisted by such unfounded charges as those alleged to have been made by the Medical Officer of Health of St. Pancras against the registration system generally in the metropolis, and especially in St. Pancras. According to the Registrar-General's Weekly Returns, it appears that during the thirteen weeks ending the 2nd inst. only 213 out of the 19,426 deaths registered in the whole of London, or scarcely more than one per cent., were uncertified. A very large proportion of these were cases of infants who died within a day or so of birth, and whose mothers had only been attended by a midwife, and had not called in a registered medical practitioner; of the remainder, a considerable proportion were cases in which the deceased had been attended either by an unqualified practitioner, or by the unqualified assistant of a registered practitioner. We should hail with satisfaction the inauguration of a system which would secure satisfactory certification of all causes of death, but considering the state of the law we are astonished at the small proportion of uncertified deaths in London, and can see no ground for complaint as to the manner in which the law is carried out. As regards registration in St. Pancras, we are informed on good authority that only two of the 1245 deaths registered within that district during the three months ending last quarter were uncertified. We agree with the Vestry Clerk, that there must be some great mistake in the matter to account for the charge of wholesale registration of uncertified deaths, whether in St. Pancras or in any other part of London. As a matter of fact, the proportion of uncertified causes of death is smaller in North London (including St. Pancras) than in any other part of the metropolis. The largest proportion of uncertified deaths occurs in South London, especially in Southwark and Woolwich.

CONVULSIONS FROM ABSINTHE.

MANY of our readers will remember the researches of M. Magnan on absinthism. He stated that the administration to an animal of a relatively small quantity of essence of absinthe causes convulsive attacks closely resembling those of epilepsy, presenting loss of consciousness, tonic and clonic spasm, with tongue-biting, involuntary evacuations, and subsequent coma. He maintained that such attacks may occur in man under the influence of great or prolonged excesses in absinthe liqueur, and, in support, he adduced cases from his own observation, and from that of others. These facts have not, however, been accepted as conclusive by all subsequent workers. Bohm and Kobert, for example, have maintained that the dose of absinthe which has to be given to a mammal to cause convulsions is so large that it is difficult to admit that a sufficient quantity is ever taken by man. They further maintain that the essence of aniseed, which is always added to the absinthe liqueur, possesses deleterious properties, and that its effect is attributed wrongly to absinthe. M. Dujardin-Beaumetz administered large doses of absinthe to pigs, but never witnessed convulsions as a consequence, although the dose amounted to one or two grammes per kilogramme of body weight.

Further doubt has been thrown upon the conclusions of M. Magnan in a recent communication of M. Lancereaux to the Académie de Médecine. In some cases of

chronic absinthism to which he alludes, in which convulsions were supposed to be due to the toxic agent, an autopsy demonstrated the existence of chronic meningitis sufficient to explain the occurrence of the convulsive attacks. In some cases of acute absinthism relied upon by M. Magnan, the attacks, according to Lancereaux, resembled those of hysteria rather than of true epilepsy, and he cites, in support of the view, five cases which have come under his own notice. In one case a regular absinthe-drinker had long-continued attacks, and was found by M. Lancereaux in a well-marked hysteroid seizure, unconscious, with opisthotonos and violent irregular movements. Neither coma nor stertor followed In the four other cases the character of the seizures was the same. Nevertheless it remains true that in some of the cases recorded by M. Magnan the attacks were of a true epileptic character, and it is quite within the range of pathological probability that the same cause should give rise in some individuals to hysteroid, and in others to epileptoid seizures. The deleterious effect of the agent is almost as grave in the one case as in the other, for recurring hysteroid attacks in men constitute almost as serious a disease as genuine epilepsy. The subject is one of more pressing moment in France than in this country, but even here we cannot afford to disregard it, since "Absinthe Suisse" is still conspicuous in the windows of not a few public-houses in London.

CORONERS, DOCTORS, AND DEATH CERTIFICATES.

A LETTER we publish elsewhere shows how much care should be taken before readily believing a statement discreditable to a medical man, though made before a coroner and a jury. Our own attitude towards the statement—that a medical man offered to give a certificate of death for 3*s.* 6*d.*—was one of simple incredulity. We did not believe that a medical man could act as Mr. Ayres was alleged to have acted in this case. The letter throws great light on the difficulty of knowing what to do in some serious cases among the poor. Surely 3*s.* 6*d.* for attendance at home for a week on a child very ill was little enough; yet it was declined by the parents, who exercised their minds rather in doubting whether the doctor could do good than in giving him the opportunity of doing it. It was the mother herself who conceived that a medical certificate could be bought without proper medical attendance and without paying even a very moderate sum for it. We may pity those whose ignorance or whose poverty leads them—and there is no evidence here that it was pure poverty—to regard a doctor as an authority for death certification, and not a physician to prevent death. But it is clearly the duty of medical men in such cases to withhold certificates. The carelessness with which death is regarded by the public must not be shared by medical men.

HOSPITAL REGISTRATION.

IT will be seen from the report given in another column that the meeting of registrars at King's College Hospital on the 6th inst. resulted in the adoption of a definite resolution, which is likely to lead to good results in the improvement of the registration of disease. The object of the meeting was to take steps to secure greater uniformity in such registration at the hospitals, and the interesting statement of Mr. Howlett showed clearly the varying systems at present in vogue. Many of the gentlemen present gave their experience of hospital registration, and, as might have been expected, opinions differed as to the comparative merits of these systems. It became obvious that it would not be possible to establish a uniform plan at the different hospitals in the matter of recording data, even if this were desirable, but there was an unanimously expressed opinion that the actual work of *registration* might be made uniform. As long as the required observations are made it does not much matter for registration purposes whether these are done by the registrar himself, or by his assistants, the important point being that the collection of the data should be pursued on the same lines in every hospital. This it would not be difficult to effect, provided—as the attendance at the meeting of representatives from eight out of the eleven metropolitan hospitals showed—that there is evinced a common desire to make the effort. The first step in this direction was the unanimous adoption of a resolution to form an Association of Hospital Registrars, which is to hold its first meeting at King's College Hospital on Nov. 3rd, when the subject of a revised index of diseases will be taken in hand. We shall watch the further progress of this movement with interest, and shall expect to see it bear early fruit in the statistical tables and reports now issued by nearly all the registrars of our hospitals.

THE NEWCASTLE-ON-TYNE INFIRMARY.

THE *Newcastle Chronicle* of October 8th, in reporting the proceedings of the quarterly court of the governors of the Infirmary of Newcastle-on-Tyne, announces the resignation of Dr. George Y. Heath as senior surgeon. The Mayor, the Sheriff, Dr. Bruce, and others, expressed feelingly their regret and sense of loss in connexion with this step on Dr. Heath's part. Dr. Heath's retirement from a post of prominence is a matter for more than local regret. He has been long regarded as one of the leaders of surgery in this country, and has contributed largely to that elevation of surgery which is so conspicuous in the last decade or two. The authorities of the Infirmary have appointed Dr. Heath consulting surgeon to the Infirmary, and so will retain the advantage of his opinion and advice when necessary. It is due to Dr. Heath that the governors should fill up the appointment with a sole regard to perpetuating the goodly fame of the Newcastle School of Surgery. Already we hear of six candidates in the field—viz., Messrs. Page, Jeaffreson, Williamson, Dodd, Dixon, and Scotland. Mr. Page's long connexion with the Infirmary as senior house surgeon, and lately as senior assistant surgeon, gives him a great advantage in the contest; but should he be elected the governors will have a difficult duty to decide between the claims of the remaining gentlemen, most of whom will probably contend for the post of assistant-surgeon.

THE CORK FEVER HOSPITAL AND DR. MACNAUGHTON JONES.

A SPECIAL general meeting of the subscribers to the Cork Fever Hospital is announced for the 15th instant at the Royal Cork Institution, to receive the report of the General Committee on the management of the hospital; and if approved, to adopt the recommendations contained in the report.

At a meeting of the Council of the Royal College of Surgeons in Ireland, held on the 7th instant, the following resolution was adopted:—"That on the consideration of the published reports of an inquiry recently held in Cork, with reference to certain charges brought against Professor Macnaughton Jones, a Fellow of the Royal College of Surgeons in Ireland, the Council of the College desires to express its opinion that the conduct of Professor Jones, as established by the investigation, was in accord with the accepted practice of medical science, and with professional usage; and that it gave no just grounds for the accusations to which he has been subjected."

At a special meeting of the Council of the Irish Medical Association, held on the 5th instant at the Royal College of Surgeons, Dublin, the following resolution was unanimously adopted:—"That the Council of the Irish Medical Associa-

tion, having regard to the facts disclosed in the recent inquiry respecting occurrences at the Cork Fever Hospital, and being of opinion that Dr. Jones acted conscientiously within the best of his judgment as a physician, and in complete accordance with professional propriety, hereby expresses its sympathy with him in regard to the charges made against him. That this Council, furthermore, in vindication of the freedom of action of a medical attendant responsible for the life and health of his patient, cannot recognise the competency of any non-medical tribunal to pass judgment on a question purely of medical science; nor does this Council consider that any physician should be held responsible for results so long as due skill and care have been devoted by him to the treatment of the patient entrusted to him. That a copy of this resolution be forwarded to Dr. Jones, and to the editors of the weekly medical journals."

Dr. John Adderley, resident medical officer of the hospital, has, we are informed, tendered his resignation.

THE PIROGOW JUBILEE.

ON the 2nd inst. the jubilee of Dr. Nicholas Pirogow's entry into the profession of medicine was celebrated. Fifty years have passed since the celebrated Russian surgeon began his career, and all ranks and classes of the Russian people have been eager to seize the occasion of testifying their affectionate admiration and regard for him. The *Voice*, writing of the event, says M. Pirogow's name is associated with every reform which has been effected in Russia during the half-century in aid of suffering humanity. We have seen him, heedless of self, devoting his care to the wounded on the field of battle during the Franco-German war, and to the sick and wounded in our camps during the recent Turkish war. Russia knows how to appreciate worthily a man who has done so much for her, and the nation will join its voice with the voices of the Medical Council of the Ministry of the Interior, who have addressed M. Pirogow as follows: "We have the agreeable duty of expressing to you, an honorary member of the Council, our most sincere congratulations on the occasion of the fiftieth year jubilee of your scientific activity, and recording our tribute of admiration to your merits. The Medical Council trusts that you will still be spared many years, to the advantage of science and to the honour and glory of our country."

THE ORIGIN OF HOSPITAL SUNDAY.

THERE be many to claim the credit of what is now become one of our best and most established institutions—Hospital Sunday. A very strong case is to be made out for giving the credit to the late Canon Miller when living at Birmingham. We ourselves are vain enough to believe that we have some claim to be considered amongst the earliest and most ardent promoters. But we must allow priority to the good people of Aberdeen. The facts adduced from the books of the Aberdeen Infirmary by the treasurer, show that a collection has been made in Aberdeen on the first day of the year since 1784 for the Infirmary, and that such a collection has been regarded by all denominations as at once a privilege and a duty.

COLLEGE OF PHYSICIANS, IRELAND.

WE understand that there will be a contest for the presidency of the College of Physicians of Ireland, the candidates being Dr. Johnston and Dr. Hayden. The election will take place next Monday, and will be by ballot.

A MEDICAL STUDENTS' SOCIETY has been formed in Melbourne. There are, it is stated, over one hundred and fifty students attending lectures in the medical school of the University of the Australian city.

THE Ophthalmological Society of Great Britain and Ireland will meet during the present year at the rooms of the Medical Society, 11, Chandos-street, Cavendish-square. The first meeting will be on Thursday, 28th inst., at 8.30 P.M., when the rules of the Society will be considered, new members elected, and papers read by Mr. Critchett, Mr. Hutchinson, Mr. Higgens, and Dr. Hughlings Jackson. Living specimens should be in attendance at 8. Applications for membership and notice of intended communications should be sent to the secretaries, Dr. Stephen Mackenzie, 26, Finsbury-square, E.C.; Mr. Nettleship, 4, Wimpole-street, W.

DR. ALFRED HUDSON, of Dublin, has resigned the Regius Professorship of Physic in the Medical School of the University of Dublin, in consequence of declining health. He was appointed early in 1878 as a successor to the late Dr. William Stokes. There are at present two candidates for the vacancy—viz., Dr. John T. Banks, and Dr. Moore, King's Professor of Practice of Medicine in the University. Should Dr. Moore obtain the post he will resign his present appointment. The emoluments attached to the office amount to £100 per annum. The appointment lies with the Board of Trinity College, who will probably elect a successor to Dr. Hudson in about a month or six weeks.

THERE is now in Barclay ward (Rachel block), under the care of Dr. Sansom, a case of hystero-epilepsy, in which the fits are provoked by pressure over the ovarian regions; they are attended with the attitude of "crucifiement" and all the typical phenomena described by Professor Charcot. The patient suffers from obstructed dysmenorrhœa, which Dr. Herman is treating by dilatation of cervix uteri. There is also a case of hysterical paraplegia; improving under treatment (by Dr. Herman) for uterine retroversion and cervical endometritis; paralytic phenomena receding.

A MEMBER of our profession has, we regret to learn, been a victim of the lawless spirit abroad in Ireland. According to the report of the Dublin correspondent of *The Times*, two ricks of hay and oats, worth £200, the property of Dr. Alexander Patton of Finglas, were burnt down on the night of the 5th inst. The outrage appears to have been committed to avenge some fancied wrong involved in the doctor engaging as servants two men from the north of Ireland.

THE death, on the 7th inst., of Deputy Surgeon-General Thomas Hunter, late of the Army Medical Department, is announced. Dr. Hunter served for many years in the 4th Queen's Own Hussars. His death on Thursday week was very sudden, at the Army and Navy Club, St. James's-square, he was found by one of the waiters in the committee-room, apparently asleep, but on assistance being sent for it was discovered that life was extinct. Dr. Hunter was unmarried.

AT St. Bartholomew's Hospital, in Sitwell ward, under the care of Mr. Willett, there is a child with congenital deformity of the left scapular arch; a bridge of bone unites the scapula to the spinous process of the sixth cervical vertebra. As the mobility of the arm is much impeded, it is proposed to remove the intervening bridge of bone.

AT the Medical Society of London on Monday evening next Dr. Hughlings Jackson will read a paper on "Cases of Recovery from Symptoms of Organic Brain Disease."

THERE seems a probability of Professor Bain becoming a candidate for the office of Assessor to the Council of the University Court of Aberdeen.

IN a case of aortic stenosis, with slight murmur of mitral regurgitation and post-diastolic murmur heard near the apex, now under Dr. Sansom's care in the London Hospital, an interesting question of diagnosis arose between "slight" aortic regurgitation and mitral stenosis. It is concluded that the murmur heard at the apex is aortic regurgitant.

THE election of Council of the Surgical Society of Ireland for the session 1880-81 will take place on Monday, November 1st, at the Royal College of Surgeons. Those entitled to vote must, besides being Members of the Society, also be either Fellows of the College of Surgeons or of the College of Physicians in Ireland.

ACCORDING to the report of the University of Dorpat for the year 1879, the number of students studying medicine there during the year was 475.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

St. Matthew, Bethnal-green (area, 755 acres; inhabited houses, 17,475; estimated population, 133,400).—Dr. Bate introduces his report for 1879 by an amusing extravagance which forcibly indicates the great changes going on in this part of the metropolis. He says if the alterations being made by the Great Eastern Railway Company, the School Board for London, and the Metropolitan Board of Works, particularly those involving the demolition of small house property, are continued much longer, Bethnal-green will become a huge agglomeration of board schools, intersected by railways and new streets. Certain it is that great clearances of old and dilapidated cottage property have been effected, and are still being carried out in the district, and the numerous large, well-built board schools form a most conspicuous feature in it; but hardly more conspicuous than the great blocks of Improved Labourers' Dwellings which have sprung up and are still springing up there, and which it is obvious will presently overshadow even the board schools. Indeed, as Dr. Bate himself shows, his prospective description of Bethnal-green would have been more accurate if he had said, "a huge agglomeration of Board Schools *and Improved Dwellings*," &c. The arrangement of these blocks of improved dwellings is said to be very good, the ventilation being excellent, and the drains well constructed. Bethnal-green, of which the name is associated with so much that is painful in the sanitary history of the metropolis, has obviously, according to Dr. Bate, a much happier sanitary future before it; and it is pleasant to find how eagerly that gentleman is striving, by precept and example, to help onward the tide of improvement which has now fully set in.

The birth-rate of Bethnal-green in 1879 was 39·3 per 1000 of the inhabitants (as against 36·5 for the whole of the metropolis), and the death-rate was 23·0 per 1000 (as against 23·3 for the whole metropolis). The death-rate has been stationary during the last three years, and on this Dr. Bate observes:—

"I cannot say that I am content with this stationary condition of things. We are only holding our ground, while we ought to be diminishing our mortality. Certainly it is in each year a little less than the general metropolitan rate, but I should like Bethnal-green to be something more than an average London parish. We have a gravelly soil, wide, well-paved roads, good sewers, a fine public park, and few offensive trades carried on in our midst; still the insalubrious condition of many of our houses (and not always the smallest ones) remains a patent fact, and undoubtedly keeps up the death-rate. The drainage arrangements of many houses are as bad as they can well be, leaky and unventilated. What we are endeavouring to abolish as much as possible just now are sinks in washhouses communicating with foul drains, and inside closets badly placed, or not thoroughly ventilated. These we get altered as soon as we discover them, but sanitary officers are not ubiquitous, and unless cases of bad drainage and defective sanitary arrangements are reported to us in time, they are frequently not discovered till the mischief is done, and a death from fever in the Registrars' weekly returns draws our attention to the locality. If people would only learn the A B C of sanitary science, keep out drain air and open their windows so as to let in fresh air, we should have fewer deaths and a healthier population.

"It cannot be too strongly impressed upon the owners of house property that it is not sufficient merely to *trap* a drain; if that drain have an opening inside the house it should be *ventilated* by a pipe continuous with some portion of it carried right above the eaves, and left wide open. If a proper trap with an air inlet be placed between the house-drain and the sewer so much the better, but *sewer* air is not so bad as it is represented, and is always infinitely better than that of small pipe drains. The sewer is well ventilated, frequently flushed, and fairly clean, so that we cannot do better than strive to obtain a similar condition of things in our small pipe drains, which, from the vile manner in which they are frequently laid and arranged, are often little better than tubular cesspools pouring their fetid effluvium into our dwellings."

We get an instructive illustration from the report of the value of infectious disease hospitals. Forty-five cases of small-pox were reported to the Sanitary Authority, and of these not less than thirty-four were removed to hospital. It cannot be doubted that if a like proportion of other dangerous infectious diseases had been isolated in hospital, a marked diminution in their prevalence must have happened. The people generally have not, however, yet reached a pitch of sanitary cultivation fully to apprehend this, but growth is slowly taking place in this direction, and sooner or later will bear fruit.

Commenting on the readiness with which the child's brain takes on morbid action, Dr. Bate observes:—"The liability of an organ like a child's brain, rapidly growing and developing as it is, to take on inflammation and disease is well known, and must be taken into account when considering any plan for the education of children. My own opinion is that no *young* child should be *forced* to learn; and that to take tender little youngsters and herd them together in stuffy or draughty schoolrooms for purposes of so-called education, is fraught with danger, not only to their brains, but to their bodies too, for no better plan of spreading infantile contagious disorders could well be devised." Taking this in conjunction with the previous gibe on Board Schools, we fear it is to be concluded that Dr. Bate does not affect these institutions.

In an appendix Dr. Bate describes and gives a plan and elevation of the new mortuary erected at Bethnal-green. The mortuary contains separate rooms for the dead from infectious and non-infectious diseases, and a post-mortem room with necessary conveniences.

REPORT OF THE LOCAL GOVERNMENT BOARD.

The ninth Annual Report of the Local Government Board (1879-80) has issued from the Parliamentary Press. It forms, as is customary with these reports, a portly volume and refers to the last year of the Rt. Hon. G. Sclater-Booth's administration. The report is pretty equally divided between the Poor-law and Public-Health work of the Board, while a bulky appendix contains much tabular matter and numerous instructional memoranda and circulars published by the Board during the period to which the report refers. The Public-Health division contains very many things of great interest, a detailed examination of which we reserve for the moment. On the whole, the general impression left by the Report is that the Board in Public-Health matters is shaking itself better into shape—feebly and sluggishly of a certainty, but still tending in a more rational direction. The Board has not the courage frankly to avow (we give it the credit of having the wisdom to perceive) that the difficulties it has had and still has to contend with, are chiefly of its own creation, and so it stands at a disadvantage in its endeavours (such as they are) to get its public-health administrative policy into a right track. Moreover, feeling the force of the apophthegm that boards have neither heads to think, nor hearts to feel, let us be thankful for such indications of amendment as we think we trace in the 672 pages octavo of printed matter now before us.

A VENTNOR OR MALEBOLGE?

Fulham is having constructed within its area a great blessing or a great curse. That is to say, according to local views; for it may chance that the construction is neither the one nor the other, but simply what it professes to be—to wit, a common-place commercial operation. An enterprising dairyman there, in fact, is building a cowshed to contain 100 cows. Now there is nothing necessarily unwholesome about cow-keeping or that should tend to unwholesomeness where the keeping is carried out in the midst of a community of which the sanitary authority does its administrative duties in a reasonably systematic manner. But cow-keepers and sanitary administrators have, unfortunately, the weaknesses of ordinary men, and certain persons living near to the spot where this cowshed is being built, distrusting equally the one and the other, complain that the shed must prove a monstrous nuisance, and, further (but in what manner does not appear), a means of spreading "fever and other diseases" in the neighbourhood—a matter held to be of no little consequence, seeing that schools are being erected by the London School Board, for 1000 children, hard by. On the other hand, it is averred that the cowshed, so far from being a nuisance, will prove an inestimable advantage to the neighbourhood. Is it not well known that the atmosphere of cowsheds is excellent for persons suffering from incipient consumption? Have not physicians in many places, and for many years, been in the habit of sending their consumptive patients to live in lofts above cowsheds, holding that breathing the moist, odoriferous air of the sheds, especially when occupied by the cows, is highly beneficial to their patients? And as to dirty cowsheds, is not the dirt an important element in the beneficial influence of the atmosphere? As a member of the Vestry ingeniously put it when this case was before that body, "the cowshed, so far from being a nuisance, would, if properly managed, become a health-resort." However, the local authority sympathise with the complainants. The building of the cowshed cannot be stopped, nor can the question of nuisance seemingly arise until cows are in it; but the Vestry propose to oppose the granting of a licence for the use of the shed as contemplated.

LONDON "DUSTING."

Every now and then a faint hope arises of some London sanitary authority becoming aroused to the error of its ways as to "dusting," and setting a good example to its brother authorities within the metropolitan area. Some such hope sprung up when, at a recent meeting of the Hackney vestry, Mr. Fitch moved "That, in the opinion of the Vestry, it be now taken into consideration whether it is not absolutely requisite, as a sanitary measure, to avoid the continuance of those centres of infection known as dust-bins; and that the dust and waste of householders should be removed daily, as it is in well-regulated municipalities—such resolution to come in force at the expiration of this present dust contract." But £20,000 a year was held to be too great a sum to pay for the privilege of being included among well-regulated municipalities and the greater wholesomeness of the district, and the motion was withdrawn. Metropolitan ratepayers complain loudly and bitterly of the evils inflicted upon them by imperfect dusting, and so long as they confine themselves to mere complaining without organising measures for controlling the action of their representatives on the Vestries and District Boards of Works, it is unlikely that we shall witness those bodies eager to carry out a reform which presents little to enlist the imagination of ambitious representatives. "Dusting" is a work of repulsive detail, of which the results mainly affect the individual householder. It has not the merits even of street scavenging, which are obvious to all men, and serve the part of whitewashing, so to speak, the metropolitan sepulchre.

WATERED MILK.

A Berkshire farmer pleaded "guilty" at the Marylebone police-court a few days ago of having sold milk diluted with water, but he explained that the water had accidentally got into the milk while the latter was being cooled in a brook. This mode of cooling demands the notice of medical officers of health, for we remember having our attention directed not long ago by a farmer, residing in the same county, to an ingenious arrangement he had made, as he thought, for cooling his milk. He had dammed a brook running through his farm so as to form a pool of sufficient depth to immerse a milk-churn. To a tree above this pool he had fixed pulleys with ropes, for readily placing the churn in and raising it from the pool. At the time we were there a full churn was suspended in the pool, with its brim just above the surface of the water. The arrangement appeared to be irreproachable, and did not want an element of the picturesque. The brook ran clear and sparkling beneath banks thickly covered with wood; the pool, also bright and clear, was surrounded by trees, and the murmur of the water above and below filled the air with a pleasant sound. But curiosity prompting us to follow up the course of the brook a few yards, there we found, hidden among the foliage, and placed *across* the stream, the one privy of a populous farmstead? The brook, while it served for cooling the milk, served also for carrying away all that was most revolting of human filth from a numerous household.

A SANITARY MYTH.

Certain questions relating to defective structural arrangements in new buildings, and especially to defective foundations, coming before the Hampstead Vestry on the 30th ult., the chairman observed that they were matters for the consideration of the district surveyor. Whereupon a member remarked that the district surveyor was "a myth." It must be admitted that there is very much to be observed in the new buildings springing up within the metropolitan area, particularly towards the margin, which tends to confirm the conclusion, that in regard to numerous important points of construction of new buildings the district surveyor is, in fact, a myth. How this comes about it is no part of our present purpose to consider, but it would be a clear gain if the public were enabled to discriminate between presumed functions of the surveyor that are mythical and functions that are real.

Both the Holborn guardians and the Marylebone guardians have applied to the Metropolitan Asylums Board for permission to rent the Hampstead Hospital pending the appeal in "Hill *v.* the Asylums Board," in order to relieve the pressure which now exists upon their workhouse accommodation. They would transfer to Hampstead such occupants of their workhouses as might be fittingly accommodated there. The Asylums Board assented to the application, subject to the approval of the Local Government Board.

The Marylebone Vestry have passed a resolution expressing the deepest regret at the death of Dr. Whitmore, and conveying to the family of that gentleman their sincere condolence with them in their bereavement. The resolution also recognises the great energy, ability, and uniform urbanity with which Dr. Whitmore carried out his duties as medical officer of health. The Vestry further directed that a copy of the resolution, framed and glazed, should be forwarded to the widow and family.

A very fatal outbreak of scarlet fever is reported at Loughton, near Epping. The Local Government Board has sent a medical inspector to the spot to confer with the sanitary authority on the measures to be adopted for arresting the spread of the disease. The schools of the locality have been closed, one of them converted into a hospital, and trained nurses secured to attend upon the sick.

The Halsted Board of Guardians, sitting as Rural Sanitary Authority, at their meeting on the 17th ult. appointed a committee to consider the provision for the Union of hospital accommodation for cases of infectious sickness. It was suggested that two or three cottage hospitals would best meet the requirements of the district.

A curious incident is reported from Olton, near Solihull, in the vicinity of Birmingham. The sanitary authority, on seeking for the source of a nuisance, discovered that a drain on a gentleman's property had been wilfully and carefully blocked with clay, turf, bags, and wood.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

The marked decline in English mortality which occurred in the previous week was scarcely maintained last week. In twenty of the largest English towns, estimated to contain in the middle of this year a population of seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 4633 births and 3118 deaths were

registered last week. The births were 552, and the deaths 157 below the average weekly numbers during 1879. The deaths, however, showed an increase of 58 upon those returned in the previous week, and were equal to an annual rate of 21·7 per 1000, whereas in the six preceding weeks the rate had steadily declined from 25·1 to 21·3. The lowest death-rates in the twenty towns last week were 14·6 in Plymouth, 15·6 in Brighton, 16·9 in Sheffield, 17·2 in Birmingham, and 18·1 in Oldham. The rates in the other towns ranged upwards to 30·6 in Liverpool, 31·2 in Salford, 34·4 in Sunderland, and 35·3 in Leicester. The high rates in the four last-mentioned towns were mainly due to excessive zymotic fatality. During the thirteen weeks ending on 2nd inst., the death-rate in these towns averaged 23·2 per 1000, against 23·8 and 18·3 in the corresponding periods of 1878 and 1879.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 1009, 912, and 657 in the three preceding weeks, further declined last week to 617; of these, 281 resulted from diarrhœa, 141 from scarlet fever, 68 from fever (principally enteric), and 60 from whooping-cough. The annual death-rate from these seven diseases averaged 4·3 per 1000 in the twenty towns, and ranged from 2·7 and 2·9 in Brighton and London, to 10·4 and 14·3 in Salford and Sunderland. The death-rate from diarrhœa did not exceed 1·4 per 1000 in London, but ranged upwards in the nineteen provincial towns to 4·8 in Leicester, 5·3 in Salford, and 5·4 in Sunderland. Scarlet fever caused more deaths than in any recent week, and showed the largest proportional fatality in Sunderland, Brighton, and Salford. Measles was somewhat prevalent in Leicester. The death-rate from enteric fever was excessive in Salford, Plymouth, and Leeds; and small-pox caused five more deaths in London. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 116, 105, and 95 at the end of the three preceding weeks, further declined to 92 on Saturday last; fourteen new cases were admitted to these hospitals during the week, against 6 and 24 in the two previous weeks. The Highgate Small-pox Hospital contained 7 patients on Saturday last.

The deaths referred to diseases of the respiratory organs in London, which had steadily increased from 124 to 199 in the four preceding weeks, further rose last week to 266, and exceeded the corrected weekly average by 42; 149 resulted from bronchitis, and 69 from pneumonia. The annual death-rate from lung diseases was equal to 3·8 per 1000 in London, 5·9 in Liverpool, and 5·6 in Salford.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 19·6 per 1000, against 18·9 and 18·8 in the two preceding weeks; this rate was, however, 2·1 per 1000 below the average rate in the twenty large English towns. The rates in the eight Scotch towns ranged from 16·8 and 17·4 in Leith and Dundee, to 20·8 and 22·3 in Edinburgh and Paisley. The fatal cases of the seven principal zymotic diseases in the eight towns, which had been 153 and 134 in the two preceding weeks, further declined to 116 last week; they included 46 from diarrhœa, 30 from scarlet fever, 13 from diphtheria, 13 from whooping-cough, 3 from measles, and not one from small-pox. The annual death-rate from these seven diseases averaged 4·7 per 1000 in the eight towns, and slightly exceeded the rate from the same diseases in the twenty English towns. No death from any of the seven diseases was recorded in Perth, while the zymotic death-rate in the other towns ranged from 1·8 in Leith to 4·6 and 7·9 in Glasgow and Edinburgh. The fatal cases of diarrhœa in the eight towns, which had been 69, 53, and 51 in the three previous weeks, further declined to 46 last week, and were equal to an annual rate of 1·9 per 1000, corresponding with the average rate from the same disease in the twenty English towns. Edinburgh showed the largest proportional fatality from diarrhœa among the Scotch towns last week. The fatal cases of scarlet fever further declined to 30 last week, from 45 and 33 in the two previous weeks; 15 occurred in Edinburgh and Leith, and 12 in Glasgow. The 13 deaths referred to diphtheria included 7 in Glasgow, 2 in Edinburgh, and 2 in Greenock. The 11 fatal cases of fever showed a decline of 6 from the number returned in the previous week; 4 were returned in Glasgow, 3 in Aberdeen, 2 in Edinburgh, and 2 in Dundee. The deaths attributed to acute diseases of the lungs (bronchitis, pneumonia, and pleurisy) were 66 in the eight towns last week, against 68 and 76 in the two preceding weeks; the annual death-rate from these diseases last week was equal to 2·7 per 1000 in the eight towns, against 3·2 in London.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, although again excessive, showed a further slight decline from that which prevailed in the three preceding weeks. The annual death-rate in the city in the four past weeks has steadily declined from 39·3 to 33·3 per 1000. During the thirteen weeks which ended on the 2nd inst. the death-rate in the city averaged no less than 34·6 per 1000, against 21·3 in London, and 21·8 in Edinburgh. The 201 deaths in Dublin last week included 53, or more than 26 per cent., which were referred to the seven principal zymotic diseases, showing, however, a further decline of 10 from the high numbers returned in the three previous weeks; 22 resulted from diarrhœa, 11 from whooping-cough, 7 from fever, 7 from scarlet fever, 5 from measles, 1 from small-pox, and not one from diphtheria. The annual death-rate from these diseases was equal to 8·8 per 1000 in Dublin, whereas it did not exceed 2·9 in London, and 7·9 in Edinburgh. The fatal cases of diarrhœa in Dublin, which had been 44 and 33 in the two previous weeks, further declined to 22 last week, and were equal to an annual rate of 3·6 per 1000; the annual death-rate from diarrhœa in London did not exceed 0·9 per 1000. The 7 deaths referred to fever, including typhus and enteric or typhoid, showed a decline of 3 from the number returned in the previous week. The deaths from scarlet fever also showed a decline; whereas those from whooping-cough and measles were somewhat more numerous. The rate of infant mortality in Dublin showed a further decline from that which had prevailed in recent weeks.

SUMMER DIARRHŒA IN LEICESTER.

It is many years since the exceptional fatality of summer diarrhœa in Leicester began to attract the attention of sanitarians, professed and amateur, and yet during the summer just over the death-rate from this disease in the town has been higher than that recorded in any of the nine preceding years. The deaths returned from diarrhœa in Leicester, which in the nine years 1871 to 1879 had ranged from 265 in 1873 to 60 in 1879, were no less than 343 in the thirteen weeks ending last Saturday, and were equal to an annual rate of 10·6 per 1000. The fatal cases of diarrhœa, which were but 2, 5, and 9 in the first three weeks of July, afterwards rose rapidly to 50 in the second week of August, after which the numbers declined slowly, and were 22 and 24 respectively in the last two weeks under notice. The fatality of other zymotic diseases was not excessive in Leicester last quarter; 43 deaths were referred to measles, 16 to scarlet fever, 13 to fever (probably enteric), 11 to diphtheria, 5 to whooping-cough, and not one to small-pox. In English urban populations more than 30 per cent. of the deaths referred to diarrhœa during the summer are usually of infants under one year of age, and it is not therefore surprising to find that infant mortality was exceptionally high in Leicester last quarter. During the thirteen weeks under notice 456 deaths of infants under one year of age were registered within the borough, against 207 and 179 in the two preceding quarters of the year; these deaths were equal to 346 per 1000 births registered. The proportion of infant mortality measured in this manner averaged 238 per 1000 in the twenty towns last quarter; it was equal to 212 in London, whereas it averaged 263 in the nineteen large provincial towns. With regard to the annual death-rate from diarrhœa last quarter, we have seen that it was equal to 10·6 per 1000 in Leicester; it averaged 4·4 in the twenty large towns (against 2·3, 4·2, and 1·2 in the three preceding corresponding quarters), and while it did not exceed 3·3 in London, it averaged 5·6 in the nineteen large provincial towns. The question naturally recurs, Why was the death-rate from diarrhœa in Leicester last quarter nearly twice as heavy as the average rate from the same disease in the nineteen provincial towns, and more than three times as great as the rate that prevailed in London during the same period? The average weekly number of deaths from diarrhœa in Leicester did not exceed 6 in July, while it increased to 35 in August, and was 36 during the five weeks ending October 2nd. It is worthy of note that nearly 99 per cent. of the causes of deaths regis-

tered in Leicester last quarter were either certified by registered medical practitioners or were the subject of inquests. It is strange, indeed, if under those circumstances some light cannot be thrown upon this annual sacrifice of infant life in Leicester. Two facts bearing upon this subject may be taken as already proved—namely, that infant mortality in Leicester is remarkably excessive from other causes as well as diarrhœa, and that Leicester is not a generally unhealthy town, inasmuch as the rate of mortality prevailing among its population above infancy bears very favourable comparison with that in most of the other large English towns. It should not surely be impossible to discover why infant mortality in Leicester is so high, while the death-rate at all other ages is comparatively low.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

DR. BEDDOE'S ADDRESS.

Dr. Beddoe's address as President of the Health Department of the Social Science Congress held in Edinburgh covered a wide range, and presented much matter for thought. In especial he impressed upon his hearers somewhat more enlarged views of the influences and agencies which have concurred in lowering the death-rates of certain sections of our population than have lately obtained to any considerable extent among sanitary workers, and he showed the erroneously limited fashion in which the term "preventable" was generally made use of as applied to disease. Taking the position that man is seen at the healthiest (physically) when he is most scattered and bears the least proportion to surrounding nature, he dwelt upon the steadily increasing tendency in civilised countries to the aggregation of people in towns, and the numerous complex questions touching the physical future of our communities arising therefrom. This "urbanisation" of man (to coin a convenient phrase for the moment) tends, Dr. Beddoe thinks, to a slowly progressive physical deterioration, but one, perhaps, not beyond the reach of arrest, if the problem be rightly apprehended. There is excellent promise of this in the appreciable effects of the great moral and social changes which have occurred during the century—the protection afforded to young children in mines and manufactures, the spread of education, and the generally more comfortable state of life of the masses—changes which have exercised a clearly measurable influence upon the well-being of the people. We are only now beginning to see our way with clearness to definite methods of dealing with the deteriorating influences peculiar to towns. We are here confronted with difficult questions of organising for the best our sanitary administration, ordering for the better our habitations, and securing reasonable purity of water-supply. We have, moreover, to reconcile our objection to the multiplying of laws (with the accompanying evil of multiplying opportunities for jobbery) with the obvious insufficiency of existing laws. Clearly, however, the liberty of builders and plumbers to perpetrate unrestricted mischief in our dwellings must be restrained, whatever our theoretical objections may be to increasing and harsher legislation on sanitary subjects. But legislation to be effective cannot pass beyond the knowledge of the persons legislated for, and our soundest improvements in sanitary and other matters affecting the physical welfare of the people will be those which keep pace with their growing knowledge. Hence, underlying all true progress in the health-reform of the kingdom, must be the sound sanitary education of the masses.

THE SOCIAL SCIENCE CONGRESS.

The Health Department of the Social Science Congress has been busily engaged in Edinburgh under the presidency of Dr. John Beddoe, F.R.S. The question of "What are the best areas for sanitary purposes, and how far should there be a revision of the mode of electing and continuing the services of the officers under the Public-Health Acts?" has been discussed, and papers on various matters concerning the public health read by Mr. Sheriff Spens, Dr. Hardesty (Galashiels), Mr. Kenneth McLeod, Baillie Colston, Sir John Rose Cormack, M.D., Dr. Littlejohn, Mr. Johnston, and others.

MR. SYMONS ON HEALTH-RESORTS.

Mr. Symons, professedly seeking information on our health-resorts at the Congress of the Sanitary Institute, Exeter, contrived to raise a vision of horror which would daunt any but the most ardent enthusiast in such a subject. Discoursing on some deficiencies in our knowledge respecting health-resorts, he showed that these were so numerous and so big that it would require, at a reasonable guess, about a generation of physicians, water-analysts, geologists, meteorologists, sanitary engineers, and statisticians to lay a foundation for making them good. It is some relief to find that the mixed physician and sanitary worker, the "sanitarian" properly so-called, as it is the habit now to designate him, is not mentioned, and that he may go on his way rejoicing; in other words, enjoying health-resorts from a lower plane of observation than Mr. Symons would recognise. He has a scheme for forming a public body, "perhaps a committee comprising representatives of the leading medical, sanitary, and scientific societies," to undertake the task of preparing an exhaustive account of our watering-places, medical, water-analytical, geological, meteorological, and so forth, and for giving the results to the world. It is a scheme which may be commended to the Institute as having abundant room for the exercise of its multifarious functions for an indefinite period of time to come, and which when (if ever) completed will at least form an important help to filling up our library shelves. We sympathise with Mr. Symons's aspirations in the matter, are prepared to be grateful for all the information he can get for us or give us on the subject, but we doubt his having seized upon it quite accurately. The number of places in this country regarded as health-resorts in the sense of being resorts for invalids in search of health are not very numerous, and fall far below those health-resorts which are frequented by persons seeking rest or recreation—most commonly recreation. In the one case we have to deal with a medical question; in the other with a question of individual tastes as various as the different modes in which rest and enjoyment are sought. In the first-named case, the health-resort proper, so to speak, information of the sort Mr. Symons seeks is desired in the interest of the invalid and of medical practice; in the second-named case, the requirements of the visitor are met by a reasonable assurance that the local sanitary arrangements are such as every authority is empowered to make. True, the "health-resorts" of the two classes may unite in one and the same place, but the distinctions noted between them are sufficiently obvious to make discrimination easy. A work of the kind suggested by Mr. Symons limited to the "health-resorts" proper would be a welcome addition to our literature; but extended indiscriminately to all places which have or may aspire to the name would, we venture to think, be a huge error and useless labour. Let us hope Mr. Symons will somewhat moderate his views in this direction.

SEWER VENTILATION AND SANITARY PROTECTION.

The recent correspondence in *The Times* on sewer ventilation chiefly brought to light the astonishing ignorance which exists among some of the more highly educated classes of society of certain of the most rudimentary sanitary matters. It was obvious that the majority of the writers had not given a moment's care to ascertain if anything definite was known on the subject on which they so unhesitatingly wrote and advised, and that they had not the remotest conception of the functions of sanitary authorities in the matter. In fact, the difficulties and dangers which troubled them were for the most part imaginary. If, however, the correspondence should give an impulse to the formation of "Sanitary Protection Associations," good will result from it. An incidental bit of information, contributed during the correspondence by "A Physician," writing from Edinburgh, deserves to be had in memory when sanitary reform comes to the front again in England. He tells us that the northern capital has an officer of which the like does not exist in English towns. He is called the burgh engineer, but his duties appear to differ in several important respects from those of the engineers and surveyors of our local authorities. He is "paid by the rates," says the writer, "and his services are at the call of every ratepayer as occasion arises. Any person suspecting that something is wrong with his drains may send up to the burgh engineer's office, and is always sure of courteous attention. Within a day or two of such application a competent person is sent

down to inspect the premises, and, if necessary, the pavement is taken up and a thorough investigation made. If nothing is found to be wrong, the householder has official assurance to that effect; and if, on the other hand, there are real grounds of complaint, the matter is taken up by the burgh engineer, who notifies the landlord that such and such alterations must be made; and if these are not quickly carried out the work is done by the burgh engineer's men at the landlord's expense. For all this no fee whatever is charged, and of every such case a record is kept at the office, so that on any future occasion it is easy to ascertain exactly what has been done. A general oversight is also given to all new buildings, and I believe that none can now be erected unless the drainage and water arrangements are satisfactory to this most beneficent despot. Why such an officer is not appointed in every town in the kingdom is to me a mystery, and I hope that the good example of Edinburgh will speedily be widely followed in this respect." We hope so too.

DIPHTHERIA IN RUSSIA.

From 1877 to 1880 diphtheria has been very fatally prevalent in the district of Tchiguirine, government of Kiew, the number of the sick from the disease sometimes having reached (as reported) no less than 6000. Under these circumstances, the medical assistance usually provided for a district—namely, one physician with six assistants—proved lamentably insufficient, and M. Soukatchew, the physician for the district in question, devised a mode of relieving this difficulty. He proposed to form a staff of women willing to give their help for the purpose, to instruct them in the general mode of treating a case of diphtheria, to furnish them with medicaments, and distribute them in the villages where the disease appeared and where proper medical care could not be had. He proposed, in fact, to train at the moment a corps of medical nurses, who would serve after a fashion as substitutes for medical men, where these could not be obtained. This proposition was submitted to the local authorities, and it was willingly acted upon. M. Soukatchew himself undertook the training of the women who volunteered, and expressed himself highly satisfied with the aptitude of his pupils. They were instructed to observe the signs of the malady, to use certain modes of treatment, to separate the sick from the healthy, to disinfect houses (burning infected articles of clothing), and to keep the physician informed of the occurrence of new cases. The plan fell in so well with the notions of the inhabitants of the district that, when at a later period certain sanitary detachments consisting of trained sisters of charity reached the district, they manifested a marked preference for the extemporised sisters.

SPLENIC FEVER.

A curious conflict of opinion is reported from Birkenhead between the officers of the sanitary authority and the officers under the Contagious Diseases (Animals) Act as to the unwholesomeness or not of a carcase, and as to the cause of death of the animal. The slaughter-house inspector, supported by the medical officer of health and a veterinary surgeon, expressed the opinion that the animal (an American bullock) had died of splenic fever; the inspector under the Contagious Diseases (Animals) Acts, the chief meat inspector at Liverpool, two veterinary surgeons, another inspector, and two old butchers, averred that the meat was good, and that the animal had not suffered from splenic fever. The stipendiary magistrate, who had been asked to condemn the carcase, gave the owner the benefit of the doubt, and refused to do so.

The *Globe* of Wednesday states: "The coroner's inquiry into the causes of the typhoid fever epidemic at Rochdale was resumed yesterday. Eleven deaths from fever, and fifty-two cases of infection, are reported to have occurred in the borough during the past two months, and in a considerable number of these cases it was shown that the milk taken by the deceased had been supplied from a particular farm. The jury were of opinion that the evidence adduced was not sufficient to prove from what particular cause the fever arose, but they considered it to have arisen either from infected milk or defective sewers."

At the suggestion of the medical officers of health of the Wandsworth and Clapham District, the Board of Works have resolved to send a memorial to Sir W. Harcourt, urging that in all cases of uncertified death, where no inquest is held, an investigation should be made, and a certificate of the cause of death given, by the medical officer of health of the district before burial. The Board also resolved to forward a copy of the memorial to each of the vestries and district boards of the metropolis, with a request for their support in the matter.

According to a statement on unhealthy lodging-houses, recently presented to the French Academy of Medicine by M. Marjolin, there are more than 2000 lodgings in the outlying quarters of Paris which derive their light from corridors only, while 3000 have no chimneys. Families of five, six, or ten persons have been found living in one room a few mètres square, a single small bed sometimes serving for as many as four or five children.

REPORT OF THE FRENCH MEDICAL COMMISSION ON PLAGUE IN ASTRAKHAN, 1878-79.[1]

THE long-expected report of the Commission—or rather Commissioner—despatched by the French Government, early last year, to make inquiry into the outbreak of plague on the banks of the Volga in the government of Astrakhan, has at length come to hand. It is not easy to understand why the publication of the report should have been so long delayed; but such disappointment as may have been experienced from the lateness of appearance is amply repaid by the greater elaboration which it has been practicable to give to the report in consequence of the delay.

The Commissioner appointed was Dr. C. Zuber, surgeon-major, joint professor of Epidemiology in the School of Val-de-Grâce. He left France for the scene of the outbreak of plague in Astrakhan on the 22nd February, 1879, and, in common with the other foreign medical commissioners (as also the Russian), got there when the outbreak was over. He nevertheless employed his time so well during his stay in the lately infected district that he has been enabled to pen a report which, for comprehensiveness and lucidity, certainly carries away the palm from the other reports of the outbreak which have hitherto appeared. We propose here briefly to glance at the general results of Dr. Zuber's inquiry, reserving until another occasion observations on disputed questions arising out of it. We have still hope that the Russian Government will eventually publish the materials they have in their possession relating to the outbreak. That Government, it is understood, contemplated a detailed medical inspection of the delta of the Volga and parts of the littoral of the Caspian, with a view to the discovery of any prevalence of larval or other forms of plague, and it may be that the publication of the official report of the outbreak on the Volga is postponed until the results of this more general inspection can be given.

With regard to the locality of the outbreak on the Volga, the distribution of the disease on both banks of the river, the period of its occurrence, its duration and probable fatality, Dr. Zuber is in accord with previous reporters. He concurs also with them in regarding the disease as true bubonic plague, and he repudiates the notion that it was the *black* or Indian plague. He lays especial stress upon the tendency of the disease to prevail as a series of house epidemics, killing the majority of the inhabitants of the houses attacked, the mortality ranging from 80 to 95 per cent. Differing in this respect from the British medical commissioners, he regards the spread of the disease by contagion as the most characteristic phenomenon of its diffusion. On the question of origin of the outbreak, moreover, he comes to conclusions widely diverse from those of both the British and the German Commissioners. He thinks it impossible to admit the autochthonous origin of the disease, advocated by Colvill, but spoken of more guardedly by Payne, and he thinks that theory of importation from Mesopotamia by way of the seat of war in Asia Minor, through the intermedium of infected spoils carried to the banks of the Volga by re-

[1] Une Mission Médicale en Russie. La Peste du Gouvernement d'Astrakhan en 1878-79. Rapport présenté à M. le Ministre de l'Agriculture et du Commerce. Par le Dr. C. Zuber, Médecin-Major, Professeur Agrégé d'Epidémiologie à l'Ecole du Val-de-Grâce. Baillière et Fils.

turning Cossacks (as thought possible by Hirsch), inconsistent with the ascertained facts, and in the highest degree improbable. On the other hand, he regards the hypothesis of an importation from Persia as supported by well-established facts, natural and demonstrable. The frequency of the communications between Astrakhan and Persia, the maritime nature of these relations, the relatively small distance between the two countries, and the insufficiency of their quarantine establishments, all tend, he thinks, to support this hypothesis. Moreover, the presence of "abortive plague" in Astrakhan, and its probable continuance there until 1879, furnish, he believes, confirmatory evidence that the plague on the Volga was derived by importation from the plague previously prevailing in the southern littoral of the Caspian in Persia.

The last word is not yet said on this outbreak of plague on the Volga, and even as we write we have before us certain new contributions of Dr. Tholozan to the literature of plague, which will render necessary a reconsideration of some of the positions taken by Dr. Zuber.

THE SERVICES.

VOLUNTEER AMBULANCE DEPARTMENT.—INSPECTION OF THE 7TH SURREY AMBULANCE CLASS.

The class of volunteers belonging to the 7th Surrey Rifles, who have lately undergone a course of instruction in ambulance and stretcher drill by Surgeon Cyril Lloyd Jones, the regimental surgeon, was inspected on Saturday last at their head-quarters, Kennington-lane, by Surgeon-General A. Shelton, head of the Medical Branch, War Office. The class went through the different evolutions of stretcher drill, and was examined in surgical assistance and the application of dressings, bandages, splints, &c., all of which were skilfully and expeditiously performed. Surgeon-General Shelton congratulated the class most warmly on their efficiency, which manifested great care and labour on the part of the instructor, the zeal and regularity which the members had shown in their attendance in the class-room, and their aptitude for the work. Major Bowen, who with the Adjutant, Lieutenant Maclure, of the London Scottish, the Hon. Secretary, and other officers received the Surgeon-General, proposed a vote of thanks, which was most cordially given, to the Surgeon-General for his kindness in making the inspection.

We are requested to announce that the next class of instruction in volunteer ambulance and stretcher drill will commence on Wednesday, October the 13th, at the Guildhall, at 7.30 P.M., and will continue each Wednesday till the end of the year. Application should be made to Lieutenant A. Maclure, London Scottish.

To be Surgeon-General — Deputy Surgeon-General Frederick Freeman Allen, C.B., of the Bengal Army.

ADMIRALTY.—Staff Surgeon Patrick Keelan has been promoted to the rank of Fleet Surgeon to Her Majesty's Fleet, with seniority of 2nd inst. Surgeons William Deacon Isaac and Christopher Harvey have been promoted to the rank of Staff Surgeon in Her Majesty's Fleet. The following appointments have been made:—Surgeon Christopher Pearson, M.D., to the *Crocodile*; Surgeon Robert Redford to Haslar Hospital; Surgeon John Arthur Langdon, additional, to the *Duke of Wellington*.

HOSPITAL REGISTRATION.

A MEETING for the purpose of considering the question of uniformity of registration in the metropolitan hospitals was held at the King's College Hospital, on Wednesday, Oct. 6th; Dr. Sidney Coupland in the chair.

After a few introductory remarks, the chairman called on Mr. Howlett to open the discussion.

Mr. HOWLETT first proceeded to explain the causes which had led to the calling of the meeting, and then went on to point out the methods of registration at present in working at the different hospitals, which were as follows:—On the medical side—1. Cases recorded by the registrar (two hospitals); 2. Cases recorded by house-physicians, the index alone being kept up by the registrar (four hospitals); 3. Cases taken by students subject to supervision by the registrar (five hospitals). On the surgical side—1. Cases recorded by the registrar (six hospitals); 2. Cases taken by students, supervision by registrars (five hospitals). He then proceeded to draw attention to the points of merit or the faults of the different systems, laying special stress on the want of control over students in those instances in which the students took a part in the case-taking; and also the difficulty of obtaining access to the notes under the circumstances in which the case books or notes were not kept either in the ward or by the patient's bed. It was also shown that the Pathological reports were kept in three different ways. 1. A report of the post mortem being added to the ward notes. 2. An abstract of the ward notes being attached to the Pathologist's report. 3. The Pathologist's report entered in a separate book, reference only being made to ward notes by vol. *x*; p. *y*. The issuing of annual reports was then briefly alluded to, and their direct bearing on the accuracy of the ward notes. It was suggested that the registrars should form themselves into an association which should hold meetings two or three times a year, at which any alterations or improvements in the method of registration could be discussed, and the attention of registrars drawn to the working out of any special point.

Dr. MAHOMED (Guy's) considered that it would be impossible to establish anything like a uniform system of registration, and of the different methods now at work he was inclined to think that one the best in which students were allowed to take part, but at the same time he was strongly in favour of registrars having complete control over the students.

Mr. SYMONDS (Guy's) was of opinion that it would be better to allow students only to keep up the daily records of the cases, and that the actual taking of the case in the first instance should be the duty of the registrar. With regard to the suggestion of forming an Association of Registrars, he considered it a good one, but feared that there would be a possibility of registrars being overburdened with work, as it was likely that the Pathological or some other Society might send down a request to the Registrars' Association to investigate some point.

Mr. MULLEN (London)—who stated he had experience of the two methods of registration: (1) in which the registrars record the case; and (2), in which the students performed those duties—was strongly in favour of the first method, and objected as strongly to the registrars having any control or connexion with the students in the work of note-taking.

Mr. CRIPPS (St. Bartholomew's) also preferred that the registrars should record all cases, and stated that at St. Bartholomew's the surgical registrars had no difficulty in recording two hundred cases each. He alluded to the faulty method of indexing diseases generally employed, and suggested that if an association of registrars were formed that this should be one of the first points to which attention be given.

Dr. DUNBAR (St. George's), Dr. GABBETT (London), and Dr. WILLCOCKS (King's), also took part in the discussion, the general impression being that it would be impossible to establish a uniform method of registration, but that an Association of Registrars would go a long way in mitigating the present evils, in that they could make suggestions for the working, or direct attention to any special point.

Mr. HOWLETT then proposed, "That an Association of metropolitan and provincial hospital registrars be formed, which shall hold occasional meetings for the general supervision of the work of registration." Mr. CRIPPS seconded the motion, which was carried unanimously.

The meeting then adjourned with a vote of thanks to the chairman.

The following hospitals were represented at the meeting—viz., St. Bartholomew's, St. George's, Guy's, King's College, London, Middlesex, University College, and Westminster. The first meeting of the new Association will be held at King's College Hospital, on Wednesday, November 3rd, at 8 P.M., to elect officers and establish a uniform index.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—Mr. Robert Lawson has obtained the Entrance Scholarship in Natural Science of the value of £100, and Mr. Herbert Lankester that of £60.

Correspondence.

"Audi alteram partem."

HYPODERMIC INJECTIONS OF MORPHIA IN CHOLERA.

To the Editor of THE LANCET.

SIR,—In justice to the whole medical profession in India, I hasten to make public what I know of our experience of the above-named treatment in Asiatic cholera, as Mr. Hardman in his exceedingly interesting communication to your columns of the 2nd inst. seems to desire. I believe I was the first to try so obvious a mode of treatment in 1865, with the *post hoc* result that six cases out of fourteen got well. This you were good enough to publish in THE LANCET in 1872, and was first made known in Deputy-Surgeon-General Murray's compendious "Report" on Cholera. The average success is scarcely above the usual one in severe epidemics. These cases, also, were all of very severe type. But most often deaths were, as usual, in the secondary fever stage. How far this was the result of the treatment is uncertain, for fatal *coma-vigil* is a common ending in the malignant disease. Reaction took place in more than half the fatal cases, and I have always found the morphia injection favour it. But it is of much more interest to inquire whether the cases cited by Mr. Hardman with so much careful accuracy were cases of choleraic diarrhœa or rather (for the term is now abolished in official reports) of the diarrhœa stages of true cholera. For if "choleraic diarrhœa" mean simply a diarrhœa bearing a certain *resemblance* to cholera, and that is the most likely to be the case, morphia is the remedy which Mr. Hardman paints it to be. Still, although it is almost certain that diarrhœa simply *resembling* cholera cannot become such, nevertheless morphia (of course, hypodermically), by diminishing exhaustive discharges and obviating blood-thickening, and perhaps as a stimulant, &c., practically, and combined with other remedies, is found to be one of our chief resources. It has been used, abandoned, and returned to over and over again. But it is not an antidote to the cholera poison (or *force*, as some thinkers have it in the sense that heat and electricity are forces). Mr. Hardman well and truly describes the features of diarrhœa resembling cholera, but unconsciousness is noted in the collapsed stage of only three out of the thirteen. Again, cramps were only noted in five cases. Cramps are also seen in bilious diarrhœa, &c., and collapse (mentioned in three of the cases) in many diseases. Rice-water stools, which are quite *sui generis*,[1] are only mentioned in one case. The purging in three others is either "watery and colourless" (this is quite different from rice-water) or "yellowish;" the other dejecta apparently were merely loose, "violent purging," &c. None of the cases presented the peculiar burning anguish over the præcordia, nor the suppression of urine, so universal in cholera. But whether the disease were cholera (at least in some of the cases) or not, the treatment does Mr. Hardman great credit. The reason why it is not so successful in malignant cholera is that it is not alone "the purging that kills," I fear; I say it with the utmost deference. It is not, at all events, the mere loss of water and salts that kills, for intravenous injections have been extensively tried since Mr. Hamilton's experiments in Edinburgh in 1833. I injected large quantities of warm water subcutaneously, not into the veins, after the plan suggested by a surgeon in Bengal. As in Hamilton's cases, every symptom disappeared only to return and kill before we had time or heart to inject more. I think I sent you the cases. It is true this man had long been troubled with chronic bronchitis and embarrassed heart. Nevertheless, as I saw a gentleman who never gave opium lose *all* his cases (16), and as the most wonderful recoveries sometimes follow a full opiate, purging must be allowed to be a factor in assisting the fatal collapse. If opium simply locked up the poison and caused subsequent uræmia, then *all* the cases taking opium would get worse and die, in a severe type of the disease, which is, as shown by Macnamara and most unprejudiced writers, utterly at variance with experience. At the very time that the anti-sedative practitioner lost all his cases a colleague saved two "without treatment," he said, but when hard pressed, he allowed that "of, course, they had had opium at the first onset." I fear that the undue dread of this medicine has made us unduly sparing of it. I have known a gentleman severely reprimanded for using it. This was in the Madras Presidency, he told me. It seems almost incredible. A soft pill (to ensure its retention by gravity, Wylie's) of calomel should be given with any injections, to encourage the depurative functions. Chloral cures cramps, but does not relieve capillary spasm in the lungs, nor, apparently, does nitrite of amyl (not extensively tried). Injection of ammonia, if strong enough to do good, causes such terrible sloughing in cholera as to be practically useless, and in any case does not seem to have had a pronounced success. I saw numbers die, after reaction, under its use. I injected bromide of ammonia late in one case (but it was a relapsed one) without appreciable effect. Diuretics, &c., must never be neglected. The cold douche helps reaction. I have not seen a case subsequently. Since my first experience as resident medical assistant in a temporary cholera hospital in England I have seen five epidemics in India, besides constant sporadic cases, which must be my excuse for troubling you, and writing too dogmatically.

I beg to remain, Sir, yours truly,

C. MACDOWALL, F.R.C.S.E., &c.

Bombay Army.

[1] I think it was Sir Joseph Fayrer who produced in dogs something like rice-water dejecta by acute poisoning with arsenic.

INTESTINAL OBSTRUCTION.

To the Editor of THE LANCET.

SIR,—I have just read Dr. Lambart's case of intestinal obstruction, published in your journal of June 26th, 1880; and think that that gentleman will not object to an account of the experience of an Indian medical officer on the same subject, which I shall make as concise as possible.

Subsequent to my commencing practice in India, and before I had read Dr. Brinton's monograph on this subject—i.e., from 1859 to 1865—very many cases of intestinal obstruction, including intussusception, came under my care, as this disease is very common among native troops, who eat only once or twice daily, and then are apt to gorge themselves with, often, indigestible, badly cooked food. Between 1859 and 1865 my treatment for such cases was castor oil internally—both by mouth and, mixed with a pint or so of warm water, by rectum—followed by calomel and opium, with, externally, fomentations, &c., and when everything else failed injections of air through the rectum. In most of the cases there was swelling—generally localised to right side of abdomen—or when there was, as often happened, general tympanitic distension of the abdomen, this enlargement was more prominent and defined on one side of the abdomen than on the other, which side was also the almost exclusive seat of the pain. In some cases blood was passed per anum, but frequently none was thus passed; vomiting soon ensued in most cases, and was, after a time, of a fæcal character; all of such cases proving fatal—i.e., cases with fæcal vomiting. In the class of cases now before my mind the symptoms were quite different from those observed in colic, and fever set in almost with the pain, which was always increased by the slightest pressure.

In 1865 I read Dr. Brinton's monograph, carefully studying the (1) mechanism of the disease (i.e., its natural history), its (2) pathology and (3) treatment, as is so beautifully, clearly, and ably described in the work referred to; and, as the monograph can be easily had at any medical bookseller's in England, I need scarcely refer further to the above three points here. Of course, in the treatment solid opium by the mouth, pushed to its most extreme limit compatible with safety from narcotism—so as to completely paralyse the affected part of the bowel—is the main principle of the treatment, as thus rest and time are allowed sufficient to permit of the invaginated portion of bowel sloughing off and of a break in continuity being prevented by the lymph, which has been previously thrown out, gluing together the upper and lower ends of the affected portion of bowel; the slough being carried off with the other contents of the bowel, and the continuity of the tube being restored by the removal of the invaginated portion thus shed. As in Dr. Brinton's cases, I found from thirty to forty days necessary for this process to take place, and in the interval only concentrated fluid nourishment in small quantities at a time was given, and by the mouth also. From twelve to twenty

grains of solid opium were sometimes given in twenty-four hours, although, generally, a smaller quantity sufficed. After a few weeks the patients complained of the pills (opium) purging them, which was really because about then large black and often fetid stools were passed. In fact, the first stools were remarkably copious with large scybala, for no other drug was given, and I cannot, now, have treated less than two hundred such (as the latter ones) cases, not one of which has terminated fatally. Other medical officers—several years since, before Dr. Brinton's work was generally read—have at my suggestion tried this treatment in similar cases and with equal success.

I am, Sir, your obedient servant,

CHARLES P. COSTELLO,
Surgeon-Major, Bengal Medical Department,
Officer in charge, 1st Goorkha, L.I.

Jagdallack Kotal, Afghanistan, July 27th, 1880.

CHIAN TURPENTINE IN CANCER.

To the Editor of THE LANCET.

SIR,—I hope I may be excused if I decline to reply to the attack made upon me by Messrs. Hickinbotham and Tait in last week's LANCET. In Birmingham, where all of us are known, there is no need for reply. To readers at a distance I may say that I cannot hold myself responsible for the failures of Dr. Hickinbotham and Mr. Tait, who unite with curious eagerness to testify that *they* can do nothing with a remedy which in other hands has proved itself valuable. As it seems that their experience extends over a very short period, it is not likely to be accepted as weighty, still less as conclusive.

With your permission I shall, from time to time, continue to report facts, which come under my observation; and I shall venture to ask candid members of the profession to do the same, as the truth can be established only by experiments widely conducted, undertaken without prejudice, and extending over a sufficient period to afford a real test of the value of Chian turpentine in cancer.

I am, Sir, yours obediently,

Birmingham, October 10th, 1880. JOHN CLAY.

THE HEALTH-RESORTS OF THE HARZ MOUNTAINS.

(From our Roving Correspondent.)

WHEREVER fresh air, temptations towards wholesome exercise and abundant opportunities for the relaxation of the mind are to be found, there may health also be met with, and since these health-giving opportunities all exist in the Harz, together with some few more special aids towards the recovery of tone, lost either through disease or undue application to professional work, we propose to give a brief sketch of the chief characteristics of a district which is not perhaps one of those which is most intimately known to British travellers.

The Harz is easily reached, and if the traveller be not afraid of a thirty-six hours' voyage, I should advise him to follow my example and go direct from London to Hamburg by steamboat. If the weather be favourable no better beginning to a holiday can be imagined than the enforced idleness, the sunlight, and the fresh air, which are the concomitants of a lucky voyage, but I say nothing of the horrors of an overfilled packet in rough weather, when ports are closed and the unhappy passengers spend their time in the stifling atmosphere of a prison lazaretto, in which that "chance of being drowned" of which Dr. Johnson spoke becomes in no short time a consummation devoutly to be wished. The visitor to the Harz will use his own judgment in such a matter, for it can also be approached with great readiness *viâ* Calais and Cologne, or by half a dozen other routes, of which he can take his choice. From Hamburg to Brunswick is but a short journey, and from the latter place to Harzburg, the most north-westerly point in the mountains, where accommodation is to be found, may figuratively be spoken of as "a mere step."

The Harz is a mountainous forest, about fifty miles long and twenty miles wide, running obliquely from the north-west to the south-east. It rises with strange abruptness from the sandy plain of North Germany. Round it is a girdle of railway which connects the important towns of Goslar to the west, Halberstadt to the north, Halle to the east, and Nordhausen to the south. From the northern half of this iron girdle run branch lines southward which just touch the mountains at Clausthal, Harzburg, Wernigerode, Blankenburg, Thale, and Ballenstedt, and serve to carry travellers and bring away the wood, iron, lead, manganese, silver, and other minerals which the district produces. A railway is being talked of to go right through the Harz from Nordhausen to Ballenstedt, but this enterprise is as yet in an embryonic condition, the surveyors having only just commenced their work.

I can add very little to the two words used to describe the Harz at the beginning of the last paragraph. It is a "mountainous forest." The mountains are none of them very high; the famous "Brocken," which towers considerably above its fellows, being about the height of Snowdon, and being almost the only one which is not wooded to its summit. The forest is everywhere surpassingly beautiful, and for the variety of foliage to be found therein it greatly excels the Black Forest, and rivals the lake districts of Cumberland or our own New Forest. The oak, beech, birch, and mountain ash are to be found in great quantities; and pines, it is needless to be said, are everywhere. There are no lakes, but rippling mountain torrents make music upon every side. The soil is almost everywhere porous, being composed of granitic and shaly detritus; and this fact, coupled with the universally undulating nature of the ground, ensures that the effects of rain are not of long duration, and that out-of-door exercise is usually possible the moment that it is dry overhead. As in all northern mountainous districts, rain is not uncommon, but it is neither so frequent nor so severe as always is the case at Killarney, and nearly always in Cumberland. The absence of lakes, the insignificant size of the rivulets, and the great number of open-air restaurants scattered here and there all testify to the fact. The two great industries of the district are wood-cutting and mining, the latter having its head-quarters at Clausthal. The climate is a temperate one, with perhaps rather more sun and certainly less rain than we are accustomed to at home. The almost entire absence of any of the more delicate fruits (even in September) and vegetables from the country markets is an indication that we are in a country verging on the barren north, while an occasional glimpse of a snow-plough by the roadside, or of a disused sledge hanging from the beams of an inn coachhouse, serve to remind one that here the rigours of winter are such as we in England have no acquaintance with.

Before going into details with regard to any one of the resorts of the Harz mountains, it may be well to state what are the good and bad points (from the point of view of the traveller and health-seeker) of the district generally. To take the good points first—we may say, *imprimis*, that the inhabitants appear to be universally obliging, scrupulously honest, and deferentially polite, and I feel sure that a lady might travel throughout the district without suffering molestation or incivility of any kind. The roads are everywhere magnificent, and well-kept footpaths for the convenience of visitors lead to all the most picturesque and interesting points. The average German does not appreciate scrambling over rocks and boulders. Quiet contemplation and rumination are his natural occupations, and he prefers to take his pleasure and his ease together, and is ready to climb to the summits of the hills provided he can do so leisurely and comfortably without having to fling away his cigar, or being obliged to discontinue his disputations or his ruminations for the sake of looking after the safety of his limbs. The points of view are all railed in, and finger-posts are so plentiful that in the depths of the forest it is not possible to lose one's way. This ample provision of paths is a great boon to ladies and persons who are not blessed with a great amount of physical vigour. Even the most determined pedestrian or climber is not allowed in the Harz to run the risk of exhaustion for want of food, for wherever he is likely to be tempted to press forward his footsteps, there he is equally sure to find the inevitable restaurant and gasthaus; and, indeed, the lively German kellner, flitting to and fro with pyramids of glittering golden beer, seems as native to the soil as the grasshopper or the dragon-fly. The omnipresence of "refreshment" is a kind of thing to which in England we are apt to apply the term "cockney," but the cockney is often a practical indi-

vidual, and some of his habits are upon occasions acceptable. It often seems, however, in Germany, as if mine host were the absolute proprietor of the beauties of nature, and that those visitors who are not endowed with a perennial appetite and an insatiable thirst were scarcely welcome.

The drawbacks to travelling in the Harz, especially to invalids, are mainly two, and these two are most important—viz., the hotels and the food.

In the first place, it is imperative that the hotel selected by a traveller in search of health should be quiet, so that sound sleep with an open window shall be possible. How rarely this is to be found every traveller knows to his sorrow. The hotels generally abut upon the village street, and the village street is always paved—or rather, we should say, covered—with huge boulders roughly placed together. Along the streets a country timber waggon will make a noise like thunder, and a light empty truck drawn by galloping dogs will produce a sound like a thousand policeman's rattles "sprung" together. He who leaves the noise of London to enjoy the peaceful quiet of a German village will often find that he has by no means improved his condition. As the villagers begin to stir soon after four o'clock in the morning, our traveller will perhaps seek his couch at an early hour; but floors and walls being thin, and the houses being to a great extent constructed of wood, he will find that sounds of various kinds, and all equally disturbing, find their way to his heavy pillow. The guests downstairs are drinking a last "toast," and growling a last pæan in praise of Vaterland and Kaiser, and when this is finished the inhabitants of the rooms on either side seek their respective beds with no little lumbering, and stamping, and clearing of throats. Then the arrivals by the last train have to be stowed away, and their boxes have to be carried up creaking stairs and along resounding passages, and then when the last "gute nacht" has sounded, and the last door has slammed, the worried traveller may sink to rest for three or four hours' quiet repose, always provided that the big dogs of the village do not take a fancy to bay the moon, or the cats of the neighbourhood be not minded to go a-courting. If it be laid down as a rule that voyagers should avoid hotels which abut upon the village street, or which are situated too near to a railway station, I fear their choice will be small. Another common and very serious defect of the hotels in the Harz is the "sanitary arrangements," if such a term can be applied to the pestilential privies which are to be found in all but the very best houses.

Next, as to the food. Good coffee and bread, excellent butter and eggs, and first-rate beer are to be got everywhere, but a wholesome, nutritious, and appetising dinner is scarcely to be got anywhere. Potatoes and grease in plenty, huge lumps of cabbage, heaps of coarse beans, compressed masses of chopped skin and sinew, to which no scrupulous person would give the name of a "rissole," added to dabs of veal and coarse beef swimming in rich oily gravies, form the staple of the table-d'hôte at all except a very few of the best hotels. Such dinners are cheap no doubt, but there is equally no doubt of their nasty and indigestible qualities. If the Germans could restore to the French their two ravished provinces, and take in exchange the knowledge of, and the talent for, the culinary art, which their neighbours possess, how very much the best of the bargain they would have.

Next, to come to particulars, Harzburg has claims to be considered a "Bath" and a health-resort, and its popularity is very greatly on the increase. It is well provided with lodging-houses and hotels; and of one of them, the Actien Hotel, which is the property of a limited company, I can confidently say it is admirably situated, and its accommodation fully equal to that which is to be found in the very best Swiss hotels. I expect that the example which has been set in Harzburg, in the matter of hotels, will be followed in other localities in the Harz. Harzburg itself is a most picturesque and delightful spot, standing at the entrance of the Radau Thal, and some seven hundred feet above the sea-level. On every side of it save to the north is the undulating forest, intersected with pleasant paths and drives. It is a point from which numberless excursions can be made, and every facility in the form of carriages, ponies, and guides is here in abundance. It has also a well-known brine spring, the so-called Julius Hall, containing rather more than six per cent. of chloride of sodium, besides other ingredients; and there is a bath-house of considerable size, where not only soul (or brine) baths may be had, but also many other varieties of baths which have been devised by German ingenuity—such as wave baths, pine baths, douche and shower baths of salt or spring water, vapour baths, inhalations of all kinds, and, lastly, malt baths (!), which I conclude is the last new thing. Being a real "Bath," Harzburg has also the resources proper to such a place—viz., a capital Kurhaus, a very good band of musicians, a first-rate promenade in the shade of a picturesque plantation of oaks, and, lastly, that collection of booths for the sale of nicknacks and trumpery without which no continental bathing-place would be complete.

Thale, which is at the eastern end of the Harz, is certainly the most picturesque spot in the whole of the district, and is probably more frequented than any. The rocky valley of the Bode can scarcely be excelled for grand magnificence and a wondrous intermixture of bold, rugged, and fantastic rocks, with soft and varied foliage, and is, I think, as picturesque a spot as it is possible to conceive. Here, too, is fair hotel accommodation, and here also is a brine bath, called the "Hubertus Bad," to which a certain number of patients repair annually to do a "cure." Thale belongs, however, rather to the tourist than the invalid, and on a Sunday especially trains come loaded with excursionists from the neighbouring cities of Magdeburg, Halberstadt, and Quedlingberg.

At Suderode, a pleasant village not far from Thale, on the southern slopes of the hills and overlooking the plain, is also a brine spring, which is used to some extent for bathing purposes.

Other picturesque spots which are much visited in summer are Ilsenburg, at the entrance of the lovely Ilsethal, Hasserode, a village close to Wernigerode, and Blankenburg. In addition to its brine springs the Harz can boast of a chalybeate spring of some notoriety. This is at Alexisbad, which is situated high in the mountains, nearly midway between Ballenstedt and Nordhausen. The situation of Alexisbad is charming, and for quiet, rural, and picturesque qualities it is not excelled by any watering-place I know. The water is a strong chalybeate, but I was unable to ascertain its exact composition. Alexisbad, notwithstanding its great natural beauties and powerful medicinal spring, seems to have passed the zenith of its fame. It was founded more than sixty years ago by one of the Dukes of Anhalt, and, with the aid of a gambling table, it obtained a certain amount of fashionable notoriety. I fear, however, its sun has nearly set. I arrived there on Sept. 15th, which is by custom the last day of the season. The "season" had certainly ended at least the day before, for I was the sole guest at this once fashionable resort, notwithstanding that the weather was still warm and summery. The healing fountain was locked up, and I only managed to taste its water by committing a pseudo-burglary. I walked through the bath-house unchallenged and alone, and noted the ample provision for bathers who had taken their departure. I paced alone the floor of the prim old-world white and gold ball-room at the Kurhaus, while my fancy took me back some sixty years to the time when the reigning beauties of the Court of Anhalt, with high-waisted dresses and with powdered hair, trod its smooth floor to the stately measure of a minuet; I peeped into the billiard-room where formerly clusters of gamblers had been grouped around the roulette table; I walked to and fro on the excellent promenade where was never a soul but myself; and finally I sat down in state in the biggest room of the best hotel to a table-d'hôte of two persons! Assuredly the Alexisbad season was at an end; and from some conversation with the natives, I gathered that of late years the number of visitors had gradually declined. During the afternoon this discarded shell of fashion was visited for a few moments by a party of royalty from the neighbouring Residency at Ballenstedt. Returning from a walk, I found a couple of Court carriages, with outriders and servants in gay liveries, in front of the Kurhaus, while their royal occupants were taking a short and stately promenade in the well-gravelled avenue, and listening to the final efforts of the Alexisbad band, stationed for the occasion on the summit of a high rock in the neighbourhood. A few strips of white and green bunting (the Anhalt colours) fluttered from the top windows of the hotel, bouquets were presented, and the Royal party of eight returned the salutations of about as many onlookers; but, alas, the royal carriages were soon refilled, the strains of the band died away, and the last faint spark of life died out in Alexisbad. There appear to be two possible causes for the waning popularity of this bath; one is that the pretty stream which

waters the valley in which it stands has been fouled and rendered turbid by some lead-works a mile or so higher up, and another is that there is a good deal of stagnant water, o'ergrown with duckweed, and no little swampy ground in the immediate neighbourhood of Alexisquelle itself. The want of direct railway communication and the competition of other and more fashionable resorts, &c., are also doubtless answerable in some degree for the small number of visitors who come to Alexisbad. Nevertheless, it is a most lovely spot, and when the railway finds its way there, as it will do in a few years, it will only require a master mind and a little energy and wise expenditure to make Alexisbad one of the most popular chalybeate springs in Europe.

PARIS.

(From our own Correspondent.)

AN unpleasant incident occurred at the last meeting but one of the Academy of Medicine. After a speech from M. Jules Guérin, in which that gentleman objected, both as a savant and as a ratepayer, to the Government grant awarded to M. Pasteur, the latter replied in a violent manner, and in a tone which was supposed by M. Guérin to impugn his scientific honour. The most objectionable phrase was as follows:—"When in the name of clinical principles a man has proposed to aspire pus to the surface of wounds by means of an india-rubber cap, some tubes, and a pneumatic pump, he is capable of anything (*on est capable de toutes les audaces*), and finds the careful and correct experimenter, who will not announce his method to the world before being able to demonstrate it, singularly simple. This is a question of scientific honour. I shall not risk compromising mine by too hasty publication for the satisfaction of gratifying the indiscreet and unhealthy curiosity of M. Guérin." M. Guérin was anxious to reply, but on the motion of Baron Larrey the sitting was immediately adjourned. What followed is not published in the official bulletin of the Academy, but may be described as a "row" between the two savants. After making a vain attempt to "go for" M. Pasteur, and unrestrainedly expressing his opinion about his colleague's veracity, M. Guérin retired. The following day brought his resignation as a member of the Academy of Medicine, and negotiations for a "meeting." M. Pasteur then placed himself in the hands of two friends, and by their intervention the matter has been arranged satisfactorily. At the last meeting a pacific letter was read from M. Pasteur, and it was announced that M. Guérin had withdrawn his resignation.

The smells of Paris have taken up the attention of the Municipal Council since the members have returned from the holidays. As usual, there is a great deal of talk but very little action. At a recent meeting, M. Alphand attempted to make out that there had in reality been very little to complain of, and that the whole outcry against the administration had been the result of a fictitious and political agitation on the part of an ill-disposed Press. Unfortunately for the public authorities, they have a very powerful opponent in this matter in the shape of M. Francisque Sarcey, the eminent critic, who happens to reside in one of the least fragrant quarters. He deals with M. Alphand's statement in a recent number of the *XIXième Siècle*, and some of his statements are worth quoting textually:—

"M. Alphand tire de cette unanimité même un argument contre la presse: Ce sont les journaux, dit-il, qui ont envenimé la question! Ce sont eux qui ont fait tout le mal! A force de crier contre les mauvaises odeurs, ils ont fini par persuader aux Parisiens et même aux étrangers, que ces mauvaises odeurs existaient véritablement. Jamais, avant ce concert de criailleries, les Parisiens ne s'étaient aperçus que ça puait chez eux. Les voilà aujourd'hui ameutés contre cette prétendue infection. A qui la faute? A ces incorrigibles bavards de journalistes. Pour un peu, Alphand dirait volontiers que c'est nous qui avons la malice de puer, pour le plaisir de donner du souci à l'administration. Depuis une huitaine de jours, ça puait tous les soirs dans mon quartier, et ça puait ferme. Un soir, notamment, ça puait si fort que je me suis vu obligé de fermer les fenêtres, et ça n'en puait que davantage. Ma foi! le lendemain matin j'avais un article à écrire; j'ai l'habitude d'entretenir nos lecteurs de tous les sujets qui m'intéressent, et juste à l'heure où ils m'intéressent et comme ça puait dans mon quartier, j'ai tout de suite dit avec ma bonhomie ordinaire: Ah! mes enfants, comme ça pue dans mon quartier! Non, mais vous n'imaginez pas comme ça pue dans mon quartier. Cette phrase m'est témoin que je ne m'étais point demandé, avant de pousser ce cri de douleur, si M. Andrieux avait pris un arrêté la veille, ni même si M. Andrieux était préfet de police. Je disais: Ça pue, parce que ça puait, avec l'ingénuité d'un homme qui se bouche le nez quand ça pue, en s'écriant: mon Dieu! que ça pue!"

The *Charivari* of last week, alluding to the same subject, represents a country gentleman in the act of inhaling the emanations from a heap of manure. "What are you doing there, papa?" asks the son. "Going into training for a visit to Paris," is the reply.

Obituary.

WILLIAM MOORHOUSE, M.R.C.S., L.R.C.P. ED.

DR. MOORHOUSE, whose death we announced last week, was a student at Edinburgh and St. Bartholomew's Hospital, and after passing his examination at the College of Surgeons went to India; subsequently he became house-surgeon at the Royal Free Hospital. After a short interval, occupied in assisting in private practice and at the Liverpool Infirmary, he commenced practice in Ellesmere, and soon became a great and universal favourite in the neighbourhood.

There was much in his character and disposition to cause him to be beloved by the generous and kind-hearted people of Shropshire, who, whether rich or poor, found that they had a sympathising friend in James William Moorhouse. He was a rigid observer of medical etiquette, and invariably acted with frankness and generosity towards a brother practitioner. He was a man of extraordinarily active habits. About two years ago his constitution showed symptoms of giving way, and on September 18th, after coming from a long journey, he was suddenly seized with a fatal attack of apoplexy, which terminated his existence in about two hours. The grief of his friends cannot be told; but the sorrow of his patients and neighbours found expression in the respect paid to his memory, as the mournful procession passed through the town on the day of interment, by the shops being closed and every other mark of regret manifested.

SIR WILLIAM LINTON, K.C.B.

WE regret to announce the death of an old and distinguished army surgeon. Sir William Linton, K.C.B., M.D., expired after a very short illness from apoplexy on Saturday last at his residence, Skairfield, Dumfriesshire. He was a graduate of Edinburgh University, and entered the Army Medical Department in 1826. He served in Canada, the Mediterranean, and the West Indies, and in 1848 was made staff-surgeon of the first class. In the Crimea he held the post of Deputy-Surgeon-General of the First Division, and was in medical charge of the General Hospital, Scutari, after the termination of the campaign. In 1857 he was promoted to the rank of Inspector-General of Hospitals, and shortly afterwards was ordered to India as Principal Medical Officer of the European Army. He acted in this capacity throughout the mutiny, and for his services was advanced to the Knighthood of the Bath, having been made a Companion of the Order in 1856. In 1859 he was appointed Honorary Physician to Her Majesty. Sir William, who was never married, was placed on the retired list in 1863.

AT an inquest held on Wednesday at Birmingham, on the body of Charlotte Stephens, widow of a jeweller, the Borough Coroner commented (says the *Globe*) strongly upon the course the police had adopted. The deceased was found lying in the street, and a policeman, supposing she was under the influence of drink, locked her up on a charge of drunkenness, but early the next morning she was removed to the hospital, where she died the same evening. The post-mortem examination proved that death resulted from apoplexy, and the jury, in returning a verdict to that effect, expressed an opinion that the woman ought to have been examined by a medical man before she was locked up in a police cell.

THE CRISIS AT GUY'S HOSPITAL.

AT the moment of going to press the rumour reaches us that the Court of Governors, at their meeting on Thursday evening, accepted the letter of withdrawal addressed to them by the medical staff.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Oct. 7th:—

Atterbury, Walter, Acacia Villa, Oppidans-road.
Davis, Edward, Euston-square.
Jay, Melville Richard Hindmarsh, Adelaide, S. Australia.
Nance, Henry Chester, Eccleshall, Staffordshire.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Henry Green, St. Mary's Hospital; Simpson Powell and Chas. Henry Whitcombe, King's College Hospital; Robert Williamson Shelley, Charing-cross Hospital.

DR. FAUSSETT, late medical officer of Clontarf Dispensary Committee, has been allowed a superannuation of £50 per annum.

ACCORDING to the report of the cattle inspectors of the county of Lancashire, pleuro-pneumonia and swine fever continue to spread. Meanwhile all available precautions seem to be taken to check the ravages of the diseases.

AT the quarterly meeting of the directors of the Compassionate Branch of the Naval Medical Supplemental Fund, on the 12th inst., Dr. H. J. Domville, C.B., Inspector-General, in the chair, the sum of £65 was distributed among the several claimants.

GUY'S HOSPITAL MEDICAL SCHOOL.—The open entrance scholarship of 125 guineas in science has been awarded to Mr. H. W. Pigeon, and that of 125 guineas in Arts to Mr. R. Moody Ward; Mr. G. E. C. Anderson *proxime accessit*.

EAST LONDON HOSPITAL FOR CHILDREN.—The fifth anniversary festival in aid of this charity was held, under the presidency of the Lord Mayor, on Wednesday evening. The aggregate number of patients treated since the foundation of the hospital amounts to 85,961. There was last year, we are sorry to learn, a falling off in the receipts to the extent of £1374—a state of things which we trust will be found to have been improved by the time the next festival comes round.

BEQUESTS AND DONATIONS TO MEDICAL CHARITIES.—The late Mr. John Skirrow Wright, of Birmingham, bequeathed £200 each to the General Hospital and the Queen's Hospital, Birmingham. By the will of Mr. George Checkland, late of Hawkswick, Herts, the Leicester Infirmary receives £100, and the Dispensary of the same town £50. The late Mr. John Andrew Jones, of New York, bequeathed 5000 dollars to the Dreadnought Hospital, Greenwich. The Brixton, Streatham-hill, and Tulse-hill Dispensary has become entitled to £50 under the will of the late Mr. John Holloway, of Brixton-road. Miss Jane Burnett, of Oldmeldrum, has left the residue of her estate to the Aberdeen Royal Infirmary.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

BATTERBURY, R. L., M.B., has been appointed Certifying Factory Surgeon for Berkhamsted.

BRUCE, R. C., M.B., C.M., has been appointed House-Surgeon to the Edinburgh Royal Maternity and Simpson Memorial Hospital.

CLARKE, J. A., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer of the Leaveaden Schools.

ESSON, W. R., L.F.P.S.G., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Lindley-cum-Quarmby District of the Huddersfield Union, vice F. C. Ellerton, resigned.

GOODE, C. F., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to the Brighton and Hove Lying-in Institution, vice Freeman, resigned.

HARRIS, F. W. H., M.R.C.S.E., has been appointed Assistant Medical Officer to the Suffolk County Asylum, vice Tate, resigned.

HEATH, G. Y., M.B., L.R.C.P.Ed., M.R.C.S.E., has been appointed Consulting Surgeon to the Newcastle-on-Tyne Infirmary, on resigning as Surgeon.

HUNT, J., M.R.C.S.E., has been elected Acting Surgeon to the Children's Hospital, Birmingham, vice Mr. G. H. Evans, resigned.

JAKINS, P. S., M.R.C.S.E., L.S.A.L., has been appointed Clinical Assistant to the Western Ophthalmic Hospital, vice Bird, resigned.

KELLETT, R. G., L.K.Q.C.P.I., L.R.C.S.I., has been reappointed Medical Officer of Health for the Halstead Urban Sanitary District. £25 per annum.

KEMPE, J. A., M.R.C.S.E. & L.R.C.P.L., has been appointed Assistant Demonstrator of Anatomy at University College Hospital.

MACDOWELL, F. V., L.R.C.S.I., has been appointed Medical Officer to the Baltinglass Union Workhouse and Fever Hospital, vice Seymour, deceased.

MAYLARD, A. E., M.B., B.Sc., has been appointed Demonstrator of Anatomy at Guy's Hospital.

PALMER, H. L., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Llanilwchairn District of the Newtown and Llanidloes Union.

PULLON, H., M.B., C.M., has been appointed House-Surgeon to the Edinburgh Royal Maternity and Simpson Memorial Hospital.

RUTHERFORD, R. L., Senior Assistant Medical Officer, Durham County Asylum, has been appointed Assistant Medical Officer to the Devon County Asylum.

STEELE, R., L.R.C.P.Ed., M.R.C.S.E., has been appointed Honorary Medical Officer to the King's College Hospital Convalescent Home, Hemel Hempstead.

WATSON, C., L.K.Q.C.P.I., has been appointed Medical Officer to the Kildare Dispensary District of the Naas Union, vice Kehoe, deceased.

WHITE, R. P., M.B., C.M., has been appointed House-Surgeon to the Halifax Infirmary, vice Hammond, resigned.

WHITE, W. H., M.B., has been appointed Resident Medical Officer to the Evelina Hospital for Sick Children.

Births, Marriages, and Deaths.

BIRTHS.

ADAMS.—On the 28th ult., at 42, Russell-road, Kensington, the wife of W. Stanley Adams, M.D., of Forest Lodge, Hongkong, of a son.

BUCHANAN.—On the 3rd ult., at Lucknow, the wife of Surgeon-Major Buchanan, Army Medical Department, of a son.

HUNTER.—On the 4th inst., at Norfolk-crescent, Hyde-park, the wife of W. Guyer Hunter, M.D., F.R.C.P., Hon. Surgeon to the Queen, Surgeon-General H.M. Indian Army, of a daughter.

PHIBBS.—On the 29th ult., at Sutherland-gardens, W., the wife of Dr. R. Featherstone Phibbs, M.R.C.P., of a son.

SPANTON.—On the 9th inst., at Chatterley House, Hanley, Staffordshire, the wife of W. D. Spanton, M.R.C.S.E., of a daughter.

THURSTAN.—On the 23rd ult., at The Hollies, Windmill-road, Croydon, the wife of E. Paget Thurstan, B.A., M.B., of a son.

MARRIAGES.

EDMOND—FRASER.—On the 13th inst., at 21, Chalmers-street, Edinburgh, by the Rev. R. Macdonald, B.D., Free Church, North Leith, and the Rev. R. G. Balfour, Free New North Church, Edinburgh, John Edmond, Advocate, Aberdeen, to Evangeline Mary, eldest daughter of Surgeon-General J. Fraser, M.D., C.B., Honorary Physician to the Queen.

HINE—HINE.—On the 30th ult., at the Wesleyan Chapel, Baldock, Herts, Alfred Leonard Hine, M.R.C.S.E., L.R.C.P., third son of the late Joseph Hine, of Newnham, Herts, to Helen, second daughter of Thomas Hine, of Baldock.

ROSE—CLARK.—On the 6th inst., at St. Stephen's Church, Westbourne-park, W., by the Rev. T. J. Rossell, M.A., Vicar (one of Her Majesty's Chaplains), William Rose, F.R.C.S., M.R.Lond., to Mary Anne Cooper, youngest daughter of Robert Clark, Solicitor, of Chepstow Villas, W.

SMITH—HIGGS.—On the 6th inst., at All Saints' Church, Clapham, by the Rev. A. G. Girdlestone, M.A., Sydney Lloyd Smith, F.R.C.P.E., M.R.C.S.E., L.S.A.L., &c. &c., second son of W. F. Smith, M.P.S., of Walworth and Brixton, to Sarah, eldest daughter of James Higgs, of Highbridge House, Brixton-hill.

STRUGNELL—BRETTINGHAM.—On the 2nd inst., at St. James's Church, Paddington, F. W. Strugnell, L.R.C.P., of Highgate road, to Elizabeth Suzette, second daughter of the late Richard F. Brettingham, of Carlton-road, Maida-vale.

DEATHS.

AITKEN.—On the 23rd August, of sunstroke, on board the s.s. *Peiho*, one day after leaving Singapore, Ewing M. Aitken, M.R.C.S.E., aged 26.

HUNTER.—On the 7th inst., suddenly, at the Army and Navy Club, London, Thomas Hunter, Esq., M.D., Deputy Inspector-General of Hospitals, late of the 4th (Queen's Own) Hussars.

SMITH.—On the 29th ult., at Stuttgart, Robert Smith, Deputy Inspector-General of Hospitals (retired), aged 72.

SPARKS.—On the 11th inst., at Misterton Lodge, near Crewkerne, the residence of his brother, Edward Isaac Sparks, M.A., B.M. Oxon., F.R.C.P., younger son of William Sparks, Esq., of Crewkerne, aged 37.

TINKER.—On the 2nd inst., suddenly, at her residence, Talbot House, Southport, Mary, relict of the late Frederick Tinker, F.R.C.S.E., of Hyde, Cheshire, aged 63.

WATTS.—On the 8th inst., at Battle, James Watts, M.R.C.S.E., in his 91st year.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 9.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, October 14th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Oct. 8	29·72	E.	53	53	..	59	50	0·22	Raining
" 9	29·67	N.E.	50	51	..	60	47	0·22	Cloudy
" 10	29·69	N.E.	53	54	..	57	51	0·20	Raining
" 11	30·31	N.E.	50	52	96	60	46	0·10	Overcast
" 12	30·16	N.E.	46	50	..	56	45	0·02	Cloudy
" 13	29·29	N.E.	48	50	..	58	45	0·02	Fine
" 14	30·42	N.	50	46	63	54	46	..	Overcast

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

SOMETHING NEW.

THIRTY-SEVEN nurses of the Poplar and Stepney Sick Asylum have petitioned for a monthly allowance instead of beer. The petition was not granted on the ground that the plan had been tried in nearly every hospital in London, and not found to work well. It was decided that nurses who did not take beer should be allowed an equivalent in milk, lemonade, or anything from the stores, except spirits.

ANTISEPTIC MIDWIFERY.

To the Editor of THE LANCET.

SIR,—I am surprised to find that Mr. Verdon's article on the above subject, in your issue of Sept. 25th, has remained unnoticed. Mr. Verdon surely is trifling with the common sense of the profession when he publishes such a case as showing the value of Mr. Lister's treatment applied to midwifery. Whether it be possible or not to apply Lister's treatment to midwifery, it is quite clear to anyone familiar with the principles and details of that treatment that Mr. Verdon did not even attempt to surmount the difficulties peculiar to such cases. He does not even allude to how urination was accomplished. Moreover, this woman had a very bad time of it, being four or five days with fever and other symptoms, and *barely* convalescent on the eleventh day. Mr. Verdon appears to attribute this to the poison of erysipelas, as the nurse was developing an attack of facial erysipelas at the time of the confinement. This may or may not be. At any rate the value of the treatment is not apparent. But Mr. Verdon tells us he has used antiseptics in ordinary midwifery cases, and with marked benefit. Really one would suppose a successful midwifery case was as remarkable as a successful ovariotomy. There is many an old midwife who would feel proud if she knew of the wonders she had been accomplishing all her life, and that, too, without the aid of antiseptics.

Yours faithfully,

Wittersham, Oct. 4th, 1880. N. W. ALLY, L.K.Q.C.P.I.

CHLORAL AND OPIUM.

To the Editor of THE LANCET.

SIR,—In reference to the risk stated to arise from the combined action of chloral and opium, I have a patient who has been taking both for some months past, and certainly without any injurious effect. During the thirty-three days preceding Sept. 2nd he took daily from thirty to forty-five minims of tincture of opium (eighteen drachms in all), and a sleeping draught of chloral, varying from twenty to forty grains (fourteen drachms and three-quarters in all). From Sept. 2nd to Sept. 12th he had opium pills only—twenty-nine, each containing one grain. From Sept. 12th to Oct. 10th inclusive he has again taken chloral, sixteen drachms in all, and fifty-six more of the one-grain opium pills.

Yours sincerely,

Lewisham, Oct. 11th, 1880. H. DISMORE, M.R.C.S., &c.

CAYMAN'S OIL IN PHTHISIS.

DR. HEFFENGER, in the *Boston Medical and Surgical Journal*, advocates the use, in consumption, of the oil obtained from the crocodile. He states that in Peru this oil has almost superseded that derived from the liver of the cod, being thought more nourishing and palatable. It is given in tablespoonful doses, after meals, for long periods.

Mr. C. Priestley.—Our space will not allow us to insert another letter from our correspondent. He will allow that we have given not a little to those who share his views.

Inquirer.—Another report will appear, probably, next week.

DOCTORS AND DEATH CERTIFICATES.

To the Editor of THE LANCET.

SIR,—I am much obliged to you for your courtesy and kindness in your notice of the charge of 3*s.* 6*d.* for a death certificate in your edition of October 2nd. Family bereavement has detained me from noticing it earlier. The facts of the case are as follows:—The woman called here with her child on Sunday night. I was at home; but my assistant, Mr. Bowden, saw the child, and prescribed for it, saying at the time, "This child is so very ill that possibly it will not live long. You had better be attended at home, and pay 3*s.* 6*d.* for the week." The reason of 3*s.* 6*d.* charge is that I have a private, a club, and a dispensary practice here, and, on the principle that poor people can only pay moderate prices, we charge for children, 2*d.*, for adults, 1*s.* each bottle of medicine at the surgery; for a single visit at home in the day, 1*s.* 6*d.*; for a week, 3*s.* 6*d.* This was the origin of the 3*s.* 6*d.* idea. We heard no more of her until Tuesday morning, when she called on me, and asked me for a death certificate, saying her child was *dead*. I said, "I don't remember your name. Who saw you?" In answer, "Mr. Bowden." "When?" "On Sunday night." I said, "Call to-morrow (Mr. Bowden not being present), and I will inquire all about it." She did so on the Wednesday. I told her, "I have inquired into your case. You are greatly to blame. We *visited in the same house* on the Monday, and yet your child being so ill, why did not you ask us to attend, or some other medical man?" She replied, "The gentleman said the child would probably not live, and I did not think you could do anything for it." I said, "Do you mean deliberately to ask me for a certificate of death without having seen your child?" The answer was, "Yes, I can pay for one. A friend of mine had one from another medical man." I asked "What medical man?" and she told me his name was "——, and that she paid 1*s.* for it." I said, "Now if you had paid your 3*s.* 6*d.* as was asked of you, your child would have been seen night or day, and then you would have received a certificate in the ordinary way. As it is, you are more guilty than the woman who brought her child here in a dying state from privation, &c., and was tried at the Old Bailey, and if you give me twenty 3*s.* 6*d.*'s I will not dream of giving a certificate." She then said, "Because I did not pay the 3*s.* 6*d.* you refuse the certificate." I told her, "If you had paid, we should have been held responsible." She then burst into tears, and asked me what she was to do. I said it would be for the coroner to decide; and out of consideration of the feeling she appeared to evince at her neglect, I said I would inform the coroner. I did so, with the result that I heard no more of the case. Not being asked to attend the inquest, and unheard, I had to bear the blame of this charge, and the remarks of the coroner. I send you his letter, which I received before I heard of the public notice.* I may mention that the coroner's remarks in his letter bear upon the fact that previously I had told him that in such cases as this one—and they are common enough here—I did not see why a medical man should inform a police officer, or the coroner's officer, or even the coroner, of a death, as we had no fund to do so with. I may mention that we had seventeen cases of dead bodies we have been called to, and in no one instance has a post-mortem or medical evidence been called. My assistant, Mr. Wm. Bowden, who has been with me for over a year, heard my remarks to this woman, as also another person present. I remain, Sir, yours truly,

JAS. W. AYRES, L.R.C.P.E., &c.

Union-street, Deptford, Oct. 6th, 1880.

* "Greenwich, S.E., Sept. 24th, 1880.

"DEAR SIR,—In reply to your letter of the 22nd inst., I held an inquest in the case of T. J. Jenkins last evening, and the jury returned a verdict of 'Died from convulsions.' It is not my custom to give certificates as to the cause of death when no inquest is held, neither am I in the habit of taking the individual opinion of a police constable as to the necessity of an inquest.

"With reference to your complaint of there being no fund to repay the medical gentlemen for their trouble in informing the police or the coroner of a suspicious death, I regret I am unable to assist you in this matter, as I possess no authority to recoup any expenses incurred for that purpose.

"I fail to perceive that you would be put to much expense or inconvenience when applied to by a relative of a deceased person for a certificate,—which you do not feel yourself justified in giving,—that they must communicate with the coroner's officer of their parish, or, if you have reason to believe that the relatives have not done so, to draw the attention of the first constable you meet to the matter.

"Yours faithfully,

"ED. ARUNDEL CARTTAR.

"Jas. Wm. Ayres, Esq., Union-street, Deptford."

A. G. P. should call on the practitioner in question, and come to a friendly understanding with him as to the case and its future relations. Such questions must constantly arise, and should admit of amicable settlement. Something depends on the degree of intimacy of the parties, and much on the disposition of the patient. We quite perceive that our correspondent puts his questions in a proper spirit towards Mr. D.

Enquirens.—1 and 2. No.—3. The Fellowship of the Royal College of Surgeons of England.

Dr. Spencer.—We regret that the letter is not suitable for our columns.

AN ILLUSTRATION OF THE SYSTEM OF CHEAP DISPENSARIES: A REPLY.

To the Editor of THE LANCET.

SIR,—It would be too bad were such a prejudiced and misleading statement as that of your correspondent "M.D." allowed to pass unchallenged.

First, he endeavours to confuse the issue by throwing upon dispensaries the odium which properly attaches to unqualified and ignorant practice—ill weeds, indeed; but they would still be found flourishing in the keeping of many a prosperous practitioner if every dispensary were closed to-morrow.

Secondly, "M.D." invites the inference, and, indeed, takes it for granted, that the cost of the medicines he ordered—all of which were, of course, absolutely necessary—must have been three shillings, because the chemist charged that sum. I would remind "M.D." that it is not the usual practice at dispensaries to send prescriptions to be made up at a chemist's, that these gentlemen usually make a profit on the drugs they dispense, and that "M.D.'s" calculations would have appeared more ingenuous had he estimated the cost at one shilling instead of three.

I will not criticise the somewhat cumbrous artillery which "M.D." brought to bear upon his patient, but will leave it to those of your readers who have had much experience of the disorder referred to to decide, whether such a case would not, as a rule, have been adequately met by a zinc powder and cotton-wool locally; and, if the neuralgia was severe, by a morphia injection, and a mixture containing arsenic, strychnine, and gelseminum, which could have been supplied at a cost of twopence or threepence.

With reference to "this kind of slopwork," which "M.D." properly inveighs against, it is indefensible. But I should like to ask any medical man who has conducted an extensive dispensary practice how many poor patients he has seen in one year suffering from scabies, who have been dosed with repeated bottles of medicine at 2s. 6d. apiece, and nothing else? How many trussed and treated hernia that cannot "face the light," and similar blunders, not the work of unqualified assistants, but of qualified and flourishing M.D.s, who may perhaps derive satisfaction from the reflection that, whatever their fees, they can never be called cheap.

No doubt there are grave abuses at some dispensaries, so there are in all classes of practice; but that does not justify the indiscriminate statements which have been so freely made, and which are stamped with envy, hatred, malice, and all uncharitableness.

Professional ignorance and carelessness are only too common, but they are not monopolised by dispensaries, and I don't doubt that if all the mistakes committed at dispensaries were collected, they could be matched by cases which come to them from neighbouring practitioners.

Yours faithfully,

October, 1880. M.R.C.S.

To the Editor of THE LANCET.

SIR,—It may make my illustration of the evil of the cheap dispensary system more complete if I say that since writing my last letter the patient has called to report himself well, and to pay my charge of two guineas, fully convinced, too, I think, that if he did not get all he wanted at a cheap dispensary for a shilling a week, he got all he could reasonably expect. The point of my present additional illustration is that not only is the patient likely to be misled and badly catered for at a cheap dispensary, but the profession is injured by one of its members doing for a shilling a week a service for which, as in this case, the patient can pay, and pay cheerfully, a guinea a week.

Your obedient servant,

London, October, 1880. M.D.

To the Editor of THE LANCET.

SIR,—I am sorry to say that "dispensary doctors" are not the only ones in our profession who charge unprofessional fees. I am in practice in the country, and in a part where the men make good wages; yet a firm of surgeons here will go from one end of the place to another for 1s. 6d. fee, including visit and medicine. I am also informed that a powder for a child can be had at their surgery for 6d., and that they are not above selling 2d. worth of castor oil. Surely these "surgeons" should add the word "chemist" to the plate on their door!

I remain, Sir, yours truly,

Sept. 28th, 1880. ANOTHER L.R.C.P. Ed.

THE COLLEGES OF PHYSICIANS AND THE TITLE OF DOCTOR.

M.D.—We entirely agree with our correspondent; but we consider the question closed, and admitting of no further discussion.

Enrom.—We cannot insert the inquiry.

Accoucheur.—The patient should have given notice of her confinement, and our correspondent has a certain legal claim upon her. Whether it is worth pressing in Court, we must leave to him to judge.

Dietetic will find part of his argument against "M.D." used by another correspondent. His views of the use, or rather the uselessness, of drugs are very peculiar.

J. R. should consult a qualified medical practitioner.

INDIAN MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—Your leader of the 29th May last, on the Imperial Policy of the Government of India in Medico-sanitary Matters, is a truthful, though trenchant, remark upon what prevails in this great English dependency.

As if to mock the recognised opinions of the most eminent authorities in Europe on cholera, its pathology and etiology, the Government of India has just ordered that the returning troops from Cabul should march through Tangi, in Peshawur, where cholera is believed to be raging severely. The telegram from Simla states that "as the Government of India does not countenance the contagion theory, our brave soldiers, after facing all the dangers of war," are once more to experiment with their lives upon a theory which is now an established fact.

In India we have no public opinion, and as regards public medical opinion we are deplorably behind even the early days of the Apothecaries' Society of London. Official etiology and pathology take precedence of everything. Medical education being entrusted to the hands of Government officials, it is easy to understand how religiously they uphold official views, both from the professorial chairs and in medical journals held exclusively by them. No newspaper, and especially no medical journal, would receive attention or support unless placed under official influence. To understand such a deplorable state of affairs in this vast empire, one has only to study the native character. A glance at some of the proceedings of the Calcutta Medical Society will at once show how the official medical autocrats get the support of the hungry aspiring youths of India.

I would draw your attention to the discussion on the "new disease" recently epidemic in Calcutta, which was officially announced as *beri beri*. No idea was more ridiculous or more revolting to educated medical men than such absurdity. Official opinion has been given grudgingly to the views of the profession in Mauritius, where a similar epidemic disease prevailed; but the ill grace which marks the change of front is too apparent in the last issue of the *Indian Medical Gazette*. I will send you a description of the Mauritius epidemic, known as "acute anæmic dropsy," as well as a full report of the epidemic here, as observed by me. In Mauritius the blood of those suffering from the disease was examined in several instances under the microscope, which revealed the presence of spirilla (beaded or chained). My observations showed some of the fission-fungi present in recurrent fever, as well as higher organisations, which I hope to be able to send to the Royal Microscopical Society, with a description. There is little doubt in my mind that relapsing fever and typhus have concurrently prevailed in Calcutta, and that the disease still continue, but less extensively. It is left to be seen if the next winter will not cause another epidemic. I might state here that the unusually protracted fall of rain in some places, and the absence of it from others, is likely to result in damage to the crops, and scarcity once more. The history of Indian famines and pestilence will soon rival similar phenomena in Ireland. I remain, Sir, yours truly,

Calcutta, August 25th, 1880. MEDICUS.

To the Editor of THE LANCET.

SIR,—In your leading article of Oct. 2nd you have pointed out the unfair way the changes in the administrative grade of the Indian Medical Service have been effected, and which appear to have been made for the special benefit of sanitary officers, who have been promoted from the grade of surgeon-major to surgeon-general, over the heads of their seniors, many of whom were selected for promotion to deputy surgeon-general years ago by the same Government which has now ordered their supercession.

There is one grievance which you have omitted to allude to, and which was lately pointed out in your columns by "Bengal Retired"—viz., the postponed allotment of retiring annuities from the Indian Medical Funds to those officers who have been compelled to retire through ill health, and from whose pay large sums have been deducted for twenty-five years, with the understanding that they would receive at the above average period of service a retiring annuity, but of which they will be now deprived for an indefinite period by the large influx of senior officers on the retired list, through the reduction of administrative appointments in the Military Department of the Indian Medical Service, which were formerly obtainable by seniority. As no satisfactory answer on the subject can be obtained from the officials at the India Office, I would suggest that a Fund be raised by retired officers for the purpose of obtaining counsel's opinion as to whether we cannot *claim* our annuities, in return for the subscriptions which were calculated by an actuary to furnish these annuities, at the average period hitherto prevailing.

Your obedient servant,

MADRAS RETIRED.

East India United Service Club, Oct. 4th, 1880.

Dr. H. R. Walwyn.—Application should be made direct to the Secretary, stating the special circumstances of the case. The general rules do not apply.

Dr. Peiva, (DAVOS.)—We regret that we are unable to find space for the communication.

Mr. A. T. Norton.—The MS. has been received.

A QUESTION IN PHARMACY.

To the Editor of THE LANCET.

SIR,—In your issue of October 9th, "L.K.Q.C.P." asks how to prepare a solution of morphia for subcutaneous injection. If he will refer to the last edition (1874) of the British Pharmacopœia, he will find "injectio morphiæ hypodermica," which might answer his purpose. This preparation, however, when long kept, deposits a little of its salt; consequently only a little should be made at once, or the addition of a little glycerine will keep the preparation any length of time. Some practitioners object to this addition of glycerine, as it is said to irritate the skin a little occasionally. When making a strong solution of morphia, it is necessary to use *a perfectly fresh salt* of morphia. Hence, in making the "injectio morphiæ hypodermica," the Pharmacopœia orders the dissolved hydrochlorate to be precipitated with ammonia, and then redissolved with a little acetic acid, so that a solution of a freshly prepared salt may remain.

Yours truly,

October, 1880. R. W. W.

To the Editor of THE LANCET.

SIR,—For some time I have used the following solution of morphia, and found it keep well:—Acetate of morphia, twelve grains; carbolic acid, five minims; distilled water, one ounce. Dissolve the morphia by gentle heat, and when cold add the acid, which must be pure. I frequently to the above add five grains of extract of belladonna, which I find prevents sickness. I have never found this deposit the morphia, and it has the advantage, after injecting, of causing no smarting.

Yours &c.,

March, Cambs, Oct. 11th, 1880. W. EASBY, M.D.

To the Editor of THE LANCET.

SIR,—In answer to the question in pharmacy by "L.K.Q.C.P." in your last issue, I find the following keeps very well:—

℞ Morphiæ mur., gr. xxiv.
Atropiæ sulph., gr. ss.
Glycerini, ʒij.
Aquæ, ʒvi.
M. v. contains ¼ gr. morphia.

Yours &c.,

Dublin, October, 1880. J. L. B.

MALTA AS A PLACE FOR PRACTICE.

Migrator would like to know if "S. G." in THE LANCET of the 2nd instant asks with a view to going or for curiosity's sake.

A Constant Reader is referred to the article on Books in our Students' Number, Sept. 11th.

Dr. Burney Yeo.—Shortly.

Alpha has forgotton to enclose his card.

TUBERCULAR DEPOSITS IN THE BOWELS AND PERITONEUM.

To the Editor of THE LANCET.

SIR,—Dr. Finlay's case of tubercular peritonitis, reported in THE LANCET of Sept. 25th, reminds me of one of tubercular deposition in the bowels and the peritoneum that I had under my care in May last.

A. L——, aged seventeen, had always been a weakly anæmic girl. Menstruation occurred for the first time twelve months previous to her present illness, recurring at irregular intervals. Latterly she had suffered much from obstinate constipation. She walked almost daily a distance of two miles to her place of business, a woollendraper's warehouse. Tea formed the principal article of her diet. On Sunday, May 9th, she walked two miles in the country, and on her return home she was taken ill with violent vomiting, coldness of the extremities, and a feeling of soreness (not particularly localised) throughout the abdomen. That night and the following morning the vomiting continued with but slight intermission.

I saw the patient for the first time on Monday at 10 A.M., and, in addition to the above account, learned that she had been menstruating the whole of the previous week, and had walked daily to and from her place of business. Menstruation was now very painful. Vaginal examination revealed the uterus retroverted and tender. The feeling of soreness throughout the abdomen still persisted. Physical examination of the chest showed nothing abnormal. There were no symptoms of cerebral disturbance. Temperature normal; pulse 82. The examination was frequently interrupted with violent retchings. I succeeded in getting the uterus replaced. The bowels were cleared by an injection, and mustard was applied to the epigastrium. She was ordered bicarbonate of potash with hydrocyanic acid, a pessary of belladonna and hyoscyamus, and enemata of brandy and beef-tea. Vomiting occurred at least a dozen times throughout the afternoon and evening, and on the following Tuesday. Creasote, bismuth, bicarbonate of soda, pepsin wine, bromide of potash, and wood-charcoal were tried, some alone, and others in combination. The only drug that seemed to allay the vomiting was charcoal given in twenty-grain doses. Wednesday and Thursday were passed in comparative ease, and the patient slept well. On Friday vomiting occurred three times, and the temperature fell to 96° in the axilla. On Saturday the vomiting was again excessive, but the temperature had risen to the normal. On Sunday about 5 P.M. she called to her mother for a drink of water, but expired suddenly before receiving it.

In this case the constipation and violent vomiting would have led one to suspect some form of intestinal obstruction; but then at no time were there febrile symptoms, actual pain was never complained of, and the constipation was easily overcome. On the other hand, the symptoms might have been caused by the retroverted uterus, as in Dr. Grailly Hewitt's case read before the Clinical Society of London. In A. L——'s case, however, replacement of the womb did not remove her distressing symptoms.

Post-mortem examination of the abdomen only was allowed. On the peritoneal layers I counted eight deposits of grey tubercle, each surrounded by a patch of congestion, the bloodvessels radiating in streaks from the deposits. Nowhere was the patch of congestion as large as a sixpenny piece. Throughout the entire length of the bowel there were found twelve deposits, the bloodvessels in close proximity to the tubercles being very large and distinct. *Three perforations* were discovered in the duodenum, two being evidently of recent origin. The stomach contained a little fluid and some pieces of toast. The womb was slightly enlarged, both ovaries being of a beautiful violet tint. The remaining viscera were healthy.

Yours truly,

M. D. KEILY, L.R.C.P., L.R.C.S.

Newcastle-on-Tyne, Sept. 30th, 1880.

Medicus.—1. He would certainly be unfit, and we have no doubt he would be considered so.—2. Our article on Books in the Students' Number will answer this question.

Dr. Reimann, (Kiew.)—Thanks.

A very Old Subscriber is thanked for bringing under our notice a very unprofessional bill.

Mr. A. Durand.—We must decline the proposal.

Dr. Sousino, (Cairo.)—We shall be glad to see the paper.

COLOUR-BLINDNESS AND RAILWAY EMPLOYÉS.

To the Editor of THE LANCET.

SIR,—In reference to your annotation of Oct. 2nd, I may say that the English Railway Companies, as well as the Indian, are fully alive to the necessity of strict examination of candidates for their service, and, in strict justice to them, I may say that as long ago as my appointment to the Great Western Railway as surgeon for this district in 1866, one of the questions was, "Can he see well, and distinguish one colour from another?" while the Midland Railway form expressly enjoins that the candidate's sight as to "distance" and "knowledge of colours" shall be *specially reported on*. The public, therefore, need not fear that so important a matter has been overlooked. But my special object in writing is to say that during the fourteen years I have examined men for these two Companies I have met with so few cases of strongly marked colour-blindness that I think its frequency is overrated. The most marked case I ever saw was a very fine young man, who had been a sailor, and who was utterly unable to distinguish between red and green either in the form of flags or (in a dark cellar) of the two colours in railway lamps, the only concession I could get from him, when he found from my examination that he had "gone wrong," being that he thought one was "a rather lighter green than the other." Cases are of much more frequent occurrence in which there is inability to distinguish different shades of the same colour and gradations of tint; but there is also a comparatively very large number of cases in which the supposed colour-blindness is not this phenomenon at all, but simply *colour-ignorance*, and it requires considerable care to distinguish between this and the true colour-blindness; for I have often been surprised at the extreme difficulty, especially among the agricultural population, in naming even the primary colours, where experiment showed that practically they thoroughly knew the difference between them, and it seems to me very probable that many of these cases have been classed as colour-blind.

One word as to the mode of examining patients for this affection. I used to have circles painted on a card for candidates to name. On one occasion a man did this very glibly and correctly; but on further testing I found he was the subject of colour-blindness sufficient to disqualify him for railway service, and I had good reason to believe that my card of coloured-discs was too well known, and that the sequence of them had been carefully noted. Since that time I have adopted a rough-and-ready but very effective method. I tell the candidate to go to my book-case, and place his hand upon a red, yellow, green, and blue book, and if he selects these colours readily from among scores of others I am satisfied; but if he chooses obscure tints of the colour for which he is asked, as sometimes happens, I then carry out a much more rigorous application of tests.

I may say, in conclusion, that more evidence is required before we can assume that this curious condition is as prevalent as has been assumed.

Yours obediently,

ROBERT BIGGS, M.R.C.S., L.S.A.,
Surgeon to Great Western and Midland Railways,
October, 1880. Bath District.

DELIRIUM FROM POISONING BY FUNGI.

To the Editor of THE LANCET.

SIR,—I shall feel greatly obliged if you will allow me to ask your readers for references to cases of delirium from poisoning by fungi.

I am, &c.,

October, 1880. J. H. J.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir J. Paget, London; Professor Wharton Jones, London; Professor G. Corradi; Mr. Walter Rivington, London; Dr. Whipham, London; Mr. Adams, London; Mr. A. Durand; Dr. W. Alexander, Liverpool; Mr. Faulds, Tokio; Mr. W. H. T. Power; Mr. T. R. Allinson; Dr. Evandeullender, Utrecht; Mr. Tuer, Buxton; Dr. M. Thomas, Glasgow; Dr. Strange, Worcester; Dr. Haig, London; Dr. Barker, Warrenpoint; Dr. Cameron, Dublin; Dr. Minns, Thetford; Signor Saffi; Mr. Macnamara, Dublin; Mr. Speedy, Dublin; Dr. Caldwell, Lakefield; Mr. Black; Dr. Lewins; Mr. Bailey, Crewe; Dr. Andrew, London; Mr. Nettleship; Mr. Nall, London; Dr. Bridges; Mr. Kenyon, Bradford; Dr. Gramshaw, Gravesend; Dr. Hardwicke, Sheffield; Messrs. Moses and Son; Mr. Walmsley, Belmont; Mr. Martindale; Dr. Tomkins, Monsall; Mr. Teevan, London; Mr. Julius Cæsar; Mr. Reynolds, High Wycombe; Miss Yates; Dr. Campbell, Liverpool; Dr. Peters; Dr. J. Jeffries, Boston, U.S.A.; Dr. Garrido; Dr. V. Jackson; Mr. Locker; Dr. Wigg; Mr. T. Woods, Gillingham; Mr. Wheeler; Dr. Hadden, London; Dr. Easby, March; Dr. Coleman, Sarbiton; Mr. Holden, Bolton; Mr. Dismore, Lewisham; Dr. Uhthoff, Brighton; Mr. S. J. Hutchinson; Dr. Smiles; Dr. Foss; Mr. Pickworth, Weardale; Mr. Walwyn, St. Kitts; Dr. Seaton, Nottingham; Dr. Sousino; Dr. Payne, Bengal; Mr. Collins, Bampton; Dr. West, Vienna; Mr. Gibbs, Dublin; Mr. Emmerson, Biggleswade; Dr. Bunce; Dr. Cook, London; Messrs. Freeman and Co., Bristol; Dr. Lister, Newton-le-Willows; Messrs. Macmillan and Co., Cambridge; Sir E. Lechmere; Mr. Pink, London; A Constant Reader; R. M. L.; Anomalous; A. G. P.; M.R.C.S.; L.R.C.P. Ed.; Dietetic; Sauve qui peut; J. L. B.; Weak Sight; A Poor Assistant; Medicus; M.D.; Pompeii; A. M. D.; J. L. S., Glasgow; R. B. G., Edinburgh; A. B.; T. G. M.; Alpha, Leicester; Fides, Sheffield; E. G., Stamford; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Rose, London; Messrs. Carter and Co., London; Mr. Barber, Sheffield; Messrs. Christy and Co., London; Mr. Walker, Wakefield; Mr. Towell, Manchester; Mrs. Pratt, Liverpool; Mr. Webb, Exeter; Mr. Schoth, London; Mr. Thompson, Ilfracombe; Mr. Smyth, Northleach; Mr. Thomas, Llandrindod Wells; Mr. Hudson, Ventnor; Mr. Huxley, Abergavenny; Mrs. Phillips, Newcastle-on-Tyne; Mr. Roberts, Attercliffe; Messrs. Maclachlan and Co., Edinburgh; Dr. Walker, Aldbrough; Mr. Dungey, Margate; Mr. Hakins, Bayswater; Mr. Gee, Royston; Mr. Johnson, Loughborough; Messrs. Gostling and Son, Diss; Dr. Walker, Cheltenham; Dr. Davies, London; Dr. Kirkpatrick, Woodbridge; Dr. Fraser, Edinburgh; Mr. Walker, Middlesbro'; Messrs. Harper and Co., Belfast; Nucleus; Magnus; Omega; Beta, Cardiff; Delta, Holywell; W. G. C. K., Kensington; P., F.R.C.S.; Rex; Sigma, Nottingham; M. S.; M.D., Bristol; S. S.; A. S.; E. A.; C. J. L., Aberdeen; L. W., Rickmansworth; Lexicon, Bow; L. L. D., Stradbroke; Medicus, Talk-on-the-Hill; Milligate; Statim, Whitton; Medicus, Chesham; Retina; R., Llandovery; M.D., Strand; Omega, Tipton; D. B.; Alpha; &c.

Church of England Temperance Chronicle, L'Union Médicale, Sciences, La Science Libre, Spiritualist, Journal des Sciences Médicales de Lille, Bradford Observer, Western Mail, Sanitary Engineer, Common Good, Revue Médicale, Pharmaceutical Journal, El Liberal, Worcestershire Chronicle, France Médicale, Perthshire Constitutional, Indian Herald, El Alvenne Médico, Allgemeine Wiener Medizinische Zeitung, Indian Daily News, Englishman, Concours Médical, &c., have been received.

Medical Diary for the ensuing Week.

Monday, Oct. 18.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
MEDICAL SOCIETY OF LONDON.—8½ P.M. Dr. J. Hughlings Jackson: "Cases of Recovery from Symptoms of Organic Brain Disease."

Tuesday, Oct. 19.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2 P.M.
PATHOLOGICAL SOCIETY OF LONDON.—8½ P.M. The following Specimens will be shown:—Case of Dilatation of Central Canal of Spinal Cord; Fibroid of the Uterus; Myeloid Tumour of Tibia; Fatty Tumour removed from Right Arytæno-epiglottidean Fold; Fatty Tumour from the Scalp; Osteitis of Femur; Acute Necrosis of Tibia; Case of Hodgkin's Disease associated with Tuberculosis.

Wednesday, Oct. 20.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

Thursday, Oct. 21.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
HARVEIAN SOCIETY.—8½ P.M. Mr. Field: "Ivory Exostosis in both Ears successfully removed by Operation."—Dr. Milner Fothergill: "Some Practical Points in Digestion."

Friday, Oct. 22.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
QUEKETT MICROSCOPICAL CLUB.—8 P.M. Dr. M. C. Cooke, "On a New Fresh Water Algæ found during the year."
CLINICAL SOCIETY OF LONDON.—8½ P.M. Mr. Clement Lucas, "On Cross-legged Progression (Scissor-legged Deformity), the result of Double Hip Anchylosis."—Dr. Greenhow, "On a Case of Intestinal Obstruction caused by a Hernia through the Mesentery of a Meckel's Diverticulum, which had retained its attachment to the Umbilicus."—Mr. H. Morris, "On Nephro-lithotomy, with a Case in which the Operation was successful."—Mr. Adams, "On a Case of Ligature of the Common Carotid and Subclavian Arteries for an Aneurism, supposed to be of the Innominate Artery."

Saturday, Oct. 23.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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The postal arrangements relating to the distribution of THE LANCET will be considered from time to time in the interests of subscribers.

Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

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